

CA20N
EAB
-0 53

ENVIRONMENTAL ASSESSMENT BOARD



ONTARIO HYDRO DEMAND/SUPPLY PLAN HEARINGS

VOLUME: 163

DATE: Tuesday, June 16, 1992


BEFORE:

HON. MR. JUSTICE E. SAUNDERS	Chairman
DR. G. CONNELL	Member
MS. G. PATTERSON	Member

FARR
ASSOCIATES &
REPORTING INC.

(416) 482-3277

2300 Yonge St. Suite 709 Toronto, Canada M4P 1E4



Digitized by the Internet Archive
in 2022 with funding from
University of Toronto

<https://archive.org/details/31761114685415>

ENVIRONMENTAL ASSESSMENT BOARD
ONTARIO HYDRO DEMAND/SUPPLY PLAN HEARING

IN THE MATTER OF the Environmental Assessment Act,
R.S.O. 1980, c. 140, as amended, and Regulations
thereunder;

AND IN THE MATTER OF an undertaking by Ontario Hydro
consisting of a program in respect of activities
associated with meeting future electricity
requirements in Ontario.

Held on the 5th Floor, 2200
Yonge Street, Toronto, Ontario,
Tuesday, the 16th day of June,
1992, commencing at 10:00 a.m.

VOLUME 163

B E F O R E :

THE HON. MR. JUSTICE E. SAUNDERS	Chairman
DR. G. CONNELL	Member
MS. G. PATTERSON	Member

S T A F F :

MR. M. HARPUR	Board Counsel
MR. R. NUNN	Counsel/Manager, Information Systems
MS. C. MARTIN	Administrative Coordinator
MS. G. MORRISON	Executive Coordinator

A P P E A R A N C E S

B. CAMPBELL	)	ONTARIO HYDRO
L. FORMUSA)	
B. HARVIE)	
J.F. HOWARD, Q.C.)	
J. LANE)	
G. A. KARISH)	
J.C. SHEPHERD	)	IPPSO
I. MONDROW)	
J. PASSMORE)	
R. WATSON	)	MUNICIPAL ELECTRIC
A. MARK	)	ASSOCIATION
S. COUBAN	)	PROVINCIAL GOVERNMENT
P. MORAN	)	AGENCIES
J. MacDONALD)	
C. MARLATT	)	NORTH SHORE TRIBAL COUNCIL,
D. ESTRIN	)	UNITED CHIEFS AND COUNCILS
H. DAHME	)	OF MANITOULIN, UNION OF
		ONTARIO INDIANS
D. POCH	)	COALITION OF ENVIRONMENTAL
D. STARKMAN	)	GROUPS
D. ARGUE)	
T. ROCKINGHAM		MINISTRY OF ENERGY
B. KELSEY	)	NORTHWATCH
L. GREENSPOON)	
P. McKAY)	
J.M. RODGER		AMPCO
M. MATTSON	)	ENERGY PROBE
T. McCLENAGHAN)	
A. WAFFLE		ENVIRONMENT CANADA
M. CAMPBELL	)	PUBLIC HEALTH COALITION
		(OPHA, IICPA)
G. GRENVILLE-WOOD		SESCI

A P P E A R A N C E S
(Cont'd)

D. ROGERS		ONGA
H. POCH	)	CITY OF TORONTO
J. PARKINSON)	
R. POWER		CITY OF TORONTO, SOUTH BRUCE ECONOMIC CORP.
S. THOMPSON		ONTARIO FEDERATION OF AGRICULTURE
B. BODNER		CONSUMERS GAS
J. MONGER	)	CAC (ONTARIO)
K. ROSENBERG)	
C. GATES)	
W. TRIVETT		RON HUNTER
M. KLIPPENSTEIN		POLLUTION PROBE
N. KLEER	)	NAN/TREATY #3/TEME-AUGAMA
J. OLTHUIS	)	ANISHNABAI AND MOOSE RIVER/
J. CASTRILLI	)	JAMES BAY COALITION
T. HILL		TOWN OF NEWCASTLE
M. OMATSU	)	OMAA
B. ALLISON)	
C. REID)	
E. LOCKERBY		AECL
C. SPOEL	)	CANADIAN VOICE OF WOMEN
U. FRANKLIN	)	FOR PEACE
B. CARR)	
F. MACKESY		ON HER OWN BEHALF
D. HUNTER	)	DOFASCO
M. BADER)	
B. TAYLOR	)	MOOSONEE DEVELOPMENT AREA
D. HORNER	)	BOARD AND CHAMBER OF
H. WATSON	)	COMMERCE

A P P E A R A N C E S
(Cont'd)

T. HEINTZMAN	)	ATOMIC ENERGY OF CANADA
D. HAMER)	
C. FINDLAY)	
P.A. NYKANEN	)	CANADIAN MANUFACTURERS ASSOCIATION - ONTARIO
G. MITCHELL		SOCIETY OF AECL PROFESSIONAL EMPLOYEES
S. GOUDGE		CUPE
D. COLBORNE		NIPIGON ABORIGINAL PEOPLES' ALLIANCE
R. CUYLER		ON HIS OWN BEHALF
L. BULLOCK	)	CANADIAN NUCLEAR ASSOCIATION
L. CHAN)	
R. MATSUI)	
M. ANSHAN		CAESCO

I N D E X o f P R O C E E D I N G S

Page No.

<u>AMIR SHALABY,</u> <u>JOHN KENNETH SNELSON,</u> <u>JANE BERNICE TENNYSON,</u> <u>FREDERICK GEORGE LONG,</u> <u>BRIAN PAUL WILLIAM DALZIEL,</u> <u>HELEN ANNE HOWES; Resumed.</u>	28721
Cross-Examination by Ms. Kleer (Cont'd)	28721
Cross-Examination by Mr. Rogers	28747
Cross-Examination by Mr. H. Watson	28774
Cross-Examination by Mr. Klippenstein	28900
Cross-Examination by Mr. Monger	28924

L I S T o f E X H I B I T S

<u>No.</u>	<u>Description</u>	<u>Page No.</u>
683.52	Interrogatory No. 10.33.16.	28795
683.53	Interrogatory No. 6.26.183.	28796
683.54	Interrogatory No. 10.33.13.	28830
683.55	Interrogatory No. 10.33.17.	28836
718	Document entitled: Sustainable Development in the Hudson Bay/ James Bay Bioregion.	28875
719	Hypotheses of Effects of Development in the Moose River Basin Workshop Summary - Final Report.	28878

L I S T o f U N D E R T A K I N G S

<u>No.</u>	<u>Description</u>	<u>Page No.</u>
684.32	Ontario Hydro undertakes to identify what concerns were identified by individuals at each and every information centre, including also a complete geographical breakdown, with respect to questions 3, 4 and 7 of the questionnaire.	28719
684.33	Ontario Hydro undertakes to determine whether the questionnaire was translated into Cree, Ojibway or Ojibway/Cree.	28759
684.34	Ontario Hydro undertakes to provide independent consultant's review updating Exhibit 24.	28930

TIME NOTATIONS

		<u>Page No.</u>
	10:03 a.m. -----	28719
	10:15 a.m. -----	28729
	10:25 a.m. -----	28736
	10:42 a.m. -----	28747
	10:55 a.m. -----	28761
	11:35 a.m. -----	28792
Recess	11:36 a.m. -----	28793
Resume	12:00 p.m. -----	28793
	12:15 p.m. -----	28808
	12:25 p.m. -----	28823
	12:45 p.m. -----	28837
Luncheon Recess	1:00 p.m. -----	28839
Resume	2:35 p.m. -----	28839
	2:25 p.m. -----	28854
	2:45 p.m. -----	28871
	3:35 p.m. -----	28887
Recess	3:48 p.m. -----	28900
Resume	4:05 p.m. -----	28900
	4:25 p.m. -----	28910
Adjourned	5:00 p.m. -----	28935

1 ---Upon commencing at 10:03 a.m.

2 THE REGISTRAR: Please come to order.

3 This hearing is now in session. Be seated, please.

4 THE CHAIRMAN: Mr. Campbell?

5 MR. B. CAMPBELL: Thank you, Mr.

6 Chairman.

7 My role here today is only to deal with
8 the outstanding matter that was left with myself and
9 Ms. Kleer, and then to disappear.

10 I can tell the Board that I have spoken
11 to Ms. Kleer this morning, and I should get an
12 undertaking number, if I could, for the next
13 undertaking.

14 THE REGISTRAR: That will be 684.32.

15 ---UNDERTAKING NO. 684.32: Ontario Hydro undertakes to
16 identify what concerns were identified by
17 individuals at each and every information
18 centre, including also a complete
19 geographical breakdown, with respect to
20 questions 3, 4 and 7 of the
21 questionnaire.

22 MR. B. CAMPBELL: What we have agreed to
23 do with respect to the matter that was being discussed
24 at the end of yesterday's hearing is, where the
25 interest, as I understand from Ms. Kleer, is really
seeing the geographic distribution of the sorts of
concerns, and certainly from our perspective, the

1 simplest way to handle it is to take the three
2 open-ended questions in the questionnaire - this is all
3 coded, I don't really understand quite how they do it -
4 but in any event, we can, with a relatively small
5 amount of work, deal with the three open-ended
6 questions and identify what concerns were identified by
7 individuals at each and every information centre, and
8 then Ms. Kleer can draw whatever conclusions she wishes
9 as to which matters received were more prominent in
10 people's mind in terms of the geographic distribution.

11 So we are prepared to give that
12 undertaking and I understand that that is agreeable to
13 Ms. Kleer on this matter.

14 MS. KLEER: It is.

15 MR. B. CAMPBELL: Thank you, Mr.
16 Chairman.

17 THE CHAIRMAN: The three open-ended
18 questions are questions 3, 4 -- and what was the other
19 question that was open-ended?

20 MR. B. CAMPBELL: And I think 7. There
21 are two forms of the questionnaire that were used.

22 THE CHAIRMAN: Actually, there may have
23 been three.

24 THE CHAIRMAN: Right, 7. All right.

25 MR. B. CAMPBELL: The significance of the

1 open-ended being that that this is unaided, it's the
2 peoples' -- the matters that they wanted to raise as a
3 response to those open-ended questions.

4 THE CHAIRMAN: And they were collected
5 and put together in, I believe, 4-3 of 535.

6 MR. B. CAMPBELL: Yes, there is a summary
7 of those kinds of things, and then we will give a
8 complete geographic breakdown according to the
9 questionnaires return from each information centre. So
10 that's what we have undertaken to do.

11 THE CHAIRMAN: And 4-9 as well is another
12 one. All right. Thank you.

13 MR. B. CAMPBELL: If I could then be
14 excused, Mr. Chairman.

15 THE CHAIRMAN: Okay.

16 MR. B. CAMPBELL: Thank you.

17 MS. KLEER: Good morning to everyone.
18 I expect to be hopefully half an hour. So we shall
19 proceed through this quickly, I hope.

20 AMIR SHALABY,
21 JOHN KENNETH SNELSON,
22 JANE BERNICE TENNYSON,
FREDERICK GEORGE LONG,
BRIAN PAUL WILLIAM DALZIEL,
23 HELEN ANNE HOWES; Resumed.

24 CROSS-EXAMINATION BY MS. KLEER (Cont'd):

25 Q. My first question is to you, Ms.

1 Howes, and it relates to cumulative effects assessment.
2 You recall that in your evidence in relation to
3 cumulative effects assessment you stated that you made
4 an effort to evaluate the cumulative effects of your
5 plans. You may wish to turn to the transcript if you
6 wish to be aided by this. Volume 148, 26246. And you
7 said, and this is starting at line 10:

8 That in attempt to identify and
9 evaluate the cumulative and environmental
10 and effects --

11 I presume that is meant to read
12 cumulative environmental effects, not cumulative and
13 environmental effects.

14 MS. HOWES: A. That's right.

15 Q. -- we did two things. First, we
16 identified or estimated the total
17 resource use, total emissions, the total
18 effluents and wastes over the planning
19 period. We also presented the data on a
20 per terawatthour basis so that we could
21 look at the trends over the planning
22 period.

23 Now just stopping there for a moment, Ms.
24 Howes. I believe you indicate in your cross-
25 examination with Mr. Starkman that you did not go any

1 further than identifying these effects, you didn't
2 actually evaluate them and say what are the impacts on
3 the environment as a result of SO₂ loading or NO_x
4 loading?

5 A. The only context which we provided
6 was a discussion of those levels of emissions for which
7 there are currently regulations and some discussion of
8 our ability to meet that regulation or not.

9 Beyond that we did not look at the actual
10 environmental impact of those emissions or effluents,
11 et cetera. Our, I guess, position is that it is more
12 appropriately done on a project-specific basis.

13 Q. All right. So then your cumulative
14 effects assessments was actually a cumulative
15 effects -- it wasn't really an effects assessment, was
16 it, it was more of a loading assessment on a cumulative
17 basis?

18 A. I am not sure I would use the word
19 "loading" because that has a specific connotation
20 within ecology or ecological sciences.

21 I think if you look at the next page of
22 the transcript, which is 26247, there was a question,
23 is this a full cumulative impact assessment, and I said
24 yes and no. Yes to the extent that we quantified what
25 our effects were, but no to the extent that it wasn't a

1 comprehensive cumulative effects assessment.

2 Q. All right. You also said in your
3 evidence at page 26246 that you assumed that Ontario's
4 regulations were set with a view to limiting emissions
5 and wastes to levels that would have acceptable
6 cumulative effects on the environment within the
7 province.

8 Could you indicate for me what the basis
9 of your assumption is?

10 A. For this statement?

11 Q. For the assumption, which you
12 referred to here as an assumption?

13 A. I think I gave an example in my
14 direct evidence of the scientific basis, for example,
15 for the Countdown Acid Rain Program. The basis of that
16 particular regulation is to look at pH levels of lakes
17 and the potential effect of changing acidity.

18 Certainly with respect to the NOx
19 regulation it also has a scientific basis and the basis
20 there is the control of ozone at I think 82 parts per
21 billion, and those were the bases for this particular
22 comment.

23 Q. All right. Just looking then at the
24 total wastes issues. You would agree with me, though,
25 that the regulations that regulate waste, for instance,

1 Regulation 309, do not have any assumptions built into
2 them about how much waste is acceptable?

3 A. No, that's true. However, the waste
4 that we produce must be controlled quite specifically
5 and I think I have indicated the trend line in terms of
6 wastes produced over our planning period and I have
7 made it quite clear that there are certain wastes that
8 would be hazardous materials that we are going to have
9 to control very specifically, and certainly that was
10 the subject, for example, of the FGD environmental
11 assessment that was done. And I would assume that any
12 other project we do that producing a significant
13 quantity of wastes we too will have to look on a
14 project specific at the environmental assessment or the
15 environmental effects not the assessment.

16 Q. But not on a cumulative basis with
17 respect to wastes?

18 A. I think it depends on where it's
19 located. For example, if we were looking, for example,
20 at the Moose River Basin through the co-planning
21 process, we have agreed that we will look at cumulative
22 effects assessments and we would have to look at the
23 wastes generated across the basin.

24 Q. All right. Just if you can indicate
25 to me what definition of cumulative effect you were

1 using when you say that, yes, you did a cumulative
2 effect assessment?

3 A. I think I qualified it. I said
4 because we looked at the environmental effects over
5 time, so we looked at the effects over the 25-year
6 planning period. We did not look, as I said in the
7 next section, at the geographic basis for that. So
8 that was the reason I said yes and no to that
9 particular answer.

10 Q. All right. So your cumulative
11 effects are cumulative effects over time, not over
12 space?

13 A. Yes, that's correct.

14 Q. Mr. Snelson, I have a question about
15 the no-approvals case. In your evidence I believe you
16 indicated that the no-approvals cases were not
17 satisfactory from a number of perspectives, including
18 the perspective of policy considerations. Do you
19 recall that evidence?

20 MR. SNELSON: A. Yes, I do.

21 Q. All right. And you cited the NDP
22 government's new energy directions policy which called
23 for early environmental assessment of some hydraulic;
24 is that correct?

25 A. Yes.

1 Q. Now, in fact, Mr. Snelson, Ontario
2 Hydro has in its update nuclear managed surplus case,
3 backed off from the government's policy on early EA in
4 that you could see, for instance, cancelling Little
5 Jackfish as one way of managing your surplus.

6 A. That was an illustrative assumption
7 which was discussed in an earlier cross-examination as
8 the reasons for it.

9 Q. But if you feel that you need to
10 deviate from the government policy with respect to
11 your, or one of your cases that you were putting
12 forward as an alternative method; namely, the nuclear
13 update case, you seem to be suggesting it's all right
14 in that case to deviate from the government policy but
15 not in the case of the no approvals. Am I correct in
16 that understanding?

17 A. No. I don't believe so.

18 Our assumptions are that we would
19 continue with the environmental assessment of Little
20 Jackfish. The illustrative surplus management, which
21 may not be the way in which it is done, showed Little
22 Jackfish not being completed. And I discussed the
23 reasons for that in a previous cross-examination. They
24 included the fact that the economics were somewhat less
25 favourable than some other options, and there was a

1 view that if the project was delayed then it might not
2 be acceptable to restart the project because of an on
3 again/off again situation several times which would be
4 a disturbance to the local community.

5 Coming back to the fundamental question
6 which is whether policy, because that would indicate
7 that there might be some circumstances in which we
8 would not follow through to the completion of the
9 building of the project, then whether that casts into
10 doubt the commitment to carry through on government
11 policy and we follow through on government policy
12 directions to Ontario Hydro.

13 The specific policy direction is for
14 early environmental assessment of the project. And on
15 some of the other projects we have stronger policy
16 directives that are more specific to those particular
17 projects. But generally we follow through on the
18 government policy. We are required to and we do so.

19 Q. All right. I also have some
20 questions in relation to your comments to Mr. Shepherd
21 regarding the Manitoba Purchase in which you indicated
22 that it is no longer being treated as a major supply
23 option. Do you recall that testimony?

24 A. No, I am afraid I don't.

25 Q. Perhaps we can turn then to Volume

1 155, at page 27573.

2 [10:15 a.m.]

3 All right. I am reading from line 2 at
4 page 27573 and I will wait until the Chairman has his
5 copy. It is near the end of the volume.

6 You indicated -- or rather the question
7 was:

8 "Now, looking through the 1989 DSP
9 and the Update I found no mention of the
10 Manitoba Purchase being lumped in with
11 and fossil as major supply options.
12 It's being treated differently now;
13 right?

14 ANSWER: "It is being treated
15 differently because it is signed
16 and it's not an option that is yet to be
17 decided. It is signed and there is a
18 contract."

19 Now, could I take it from that answer,
20 Mr. Snelson, that the Manitoba Purchase is no longer a
21 major supply option?

22 A. It is still considered to be major
23 supply, but as you read further down the page it says:

24 "QUESTION: So once the contract is
25 signed, do I take it that we treat it as

1 more like part of the existing system
2 rather than as one of many future
3 demand/supply options?"

4 And my answer was:

5 "I think we treat it the same as any
6 other signed contract such as a signed
7 contract for a non-utility generator."

8 So the discussion is not major supply.

9 The discussion is really as to the degree of firmness
10 of that commitment and with a contract being signed,
11 then there is some commitment to that project and while
12 it isn't quite the same as part of the existing system
13 it is an existing commitment of Ontario Hydro.

14 Q. But it is a commitment with a very
15 important condition; namely, obtaining environmental
16 approval?

17 A. That is correct.

18 Q. Now, just to look at another option,
19 the Mattagami extension. That is a deal with Smoky
20 Falls that was signed in the Mattagami environmental
21 assessment and if it does not result in approvals I
22 understand that the Ontario government will have to pay
23 Ontario Hydro a penalty of a sort; correct?

24 A. That is my understanding.

25 Q. Now, do you treat the Mattagami

1 extensions in the same way that you treat the Manitoba
2 purchase because there is a deal that's been signed?

3 Is it somehow more firm than other things
4 about which deals have not been signed?

5 A. Well, there is a difference, but
6 there is some similarity and clearly there is a
7 contractual commitment and if you go through our
8 no-approvals case you will find that the Manitoba
9 purchase and Smoky Falls are treated in a similar
10 fashion, in that, in the no-approvals case we assumed
11 that the Manitoba Purchase would not go ahead and we
12 assumed that the Mattagami extensions would not go
13 ahead and we assumed that in both cases the contractual
14 provisions for what happens if those projects don't
15 proceed were, in fact, executed.

16 In the case of the Manitoba Purchase,
17 there was a payment that Ontario Hydro would have to
18 make to Manitoba Hydro and in the case of Mattagami,
19 there was a payment that the Ontario government would
20 have to make to Ontario Hydro. So we treated them the
21 same in that respect, in the no-approvals case.

22 Q. Let me ask you a question about the
23 no-approvals case. I believe in cross-examination by
24 Mr. Hamer for AECL that you indicated that your update
25 nuclear and your update fossil cases were alternative

1 methods?

2 A. I think we indicated they were
3 alternative ways of carrying out the undertaking.

4 Q. All right. Is the no-approvals case
5 an alternative way of carrying out the undertaking?

6 A. I believe so. I think we believe it
7 has some deficiencies, but I believe so.

8 Q. Now, Mr. Snelson, in relation to the
9 Manitoba Purchase again, you have indicated of course
10 that it is a contract that has some important
11 conditions.

12 Now, would your position on the firmness
13 of that contract and that deal change if in Manitoba
14 there were circumstances that suggested that the
15 approval or the lack of approval was going to be
16 delayed because of hearing processes that were going on
17 in Manitoba?

18 A. I think that's something we would
19 have to address at that time in discussions between
20 Ontario Hydro and Manitoba Hydro.

21 The actual schedule of the hearing
22 process in Manitoba is not directly of concern to us,
23 though of course it starts to impinge on their ability
24 to meet the terms of their contract, then obviously
25 this is a matter that is of concern to us.

1 Q. All right. In that vein I would like
2 to look at Exhibit 716 which we referred to yesterday
3 for some portions of the transcript.

4 I would like to first look at the press
5 clipping that we have from the Winnipeg Free Press
6 which is the first page following the document precis
7 and I will also be looking at some of the transcript
8 references.

9 Just looking at the second and third
10 paragraph of the press release, it indicates there that
11 an official with the Crown utility; namely, Manitoba
12 Hydro, confirmed yesterday that the environmental
13 review will take longer than anticipated, adding he
14 does not yet know if the construction schedule will be
15 altered.

16 Then there is a quote:

17 "Anything that adds to the length of
18 the schedule of the review is going to be
19 a problem for us, said Dr. Ian Dixon,
20 Hydro's Vice-President of Environmental
21 Affairs. I expect that the guidelines
22 are going to extend the job that we had
23 hoped to get done in our own time frame
24 by some time. There is no doubt about
25 it."

1 Just again for the context perhaps we can
2 turn to the transcript that follows this and turn to
3 page 150.

4 THE CHAIRMAN: I'm sorry, what is this a
5 transcript of?

6 MR. KLEER: Pardon me. This is a
7 transcript from the joint panels scoping session for
8 the Conawapa project which was held in Winnipeg on June
9 3 and June 4.

10 Q. Now, I am asking a question here of
11 Dr. Dixon, who, as we saw, is vice-president of
12 environmental affairs at Manitoba Hydro. I asked the
13 question at line 5 at page 150, first as a matter of
14 clarification on point E.

15 You make a point that other projects
16 being proposed in a similar time frame
17 should be considered in combination with
18 the Conawapa project for purposes of
19 cumulative assessment. Can somebody
20 explain to me precisely what they mean by
21 other projects?

22 Dr. Dixon answers:

23 Let me take a crack at what I think
24 you are implying by your question and
25 that is, in any form of cumulative impact

1 studies all of the factors; i.e.,
2 projects that are affecting the region,
3 should be included in that assessment.
4 So the statement perhaps suggests that we
5 have to do our cumulative impact
6 assessment having regard for other
7 projects such as the Quebec project, a
8 proposed Moose River development or any
9 other factors that are operating here.
10 And obviously that's the difficulty
11 involved in a cumulative impact
12 assessment, but nevertheless there is the
13 need for it.

14 So, yes, we are going to take a crack
15 at trying to paint a picture, putting all
16 of the pieces together as best we can
17 given the techniques that are available
18 today and with the information that
19 exists today because it is implicit, I
20 believe, in the guidelines coming out
21 from Quebec that that kind of assemblage
22 of impacts be constructed as part of any
23 assessment.

24 Then I go on to ask a question of
25 clarification.

1 So just to be clear, then, you are in
2 fact going to look at the impacts of
3 Conawapa together with the existing
4 projects in Quebec including Great Loyola
5 Gas and also the proposed development in
6 both Ontario and Quebec?

7 Dr. Dixon answers:

8 My understanding is that we are going
9 to take a crack at it, yes, because
10 that's the nature of the cumulative
11 impacts that are being defined for us
12 today.

13 Now, Mr. Snelson, in light of the fact
14 that Manitoba Hydro, at least at this point, although
15 the environmental impact statement guidelines have not
16 yet been released is looking very seriously at doing a
17 cumulative impact assessment and expects that it may
18 take them more time than they anticipated, has Ontario
19 Hydro taken any steps to talk with Manitoba Hydro about
20 how this will affect the Manitoba Purchase?

21 MR. SNELSON: A. Not to my knowledge and
22 I think you have to be very careful in reading a press
23 review. I think you called it press release. I
24 believe it is actually an extract from a newspaper.

25 [10:25 a.m.]

1 Q. You're right, it's not a release.

2 It's a press clipping.

3 A. You have to be very careful what
4 conclusions you draw from press clippings, and to my
5 knowledge at this time I do not know of any direct
6 discussions between Manitoba Hydro and Ontario Hydro
7 with regard to any change in the schedule.

8 Q. I presume that Ontario Hydro will let
9 us know if that does occur?

10 THE CHAIRMAN: If there is a change in
11 schedule you mean?

12 MS. KLEER: Yes.

13 Q. I presume that's so, Mr. Snelson?

14 MR. SNELSON: A. I would presume that if
15 there is a change in schedule, then we would be
16 advising you so.

17 MRS. FORMUSA: Although, Mr. Chairman, I
18 would remind you of the evidence of Panel 7 with
19 respect to the contract and the requirement in the
20 contract to supply the power as it ramps up over the
21 years; and it doesn't have to come from Conawapa. That
22 was the evidence of Panel 7. So I am not certain that
23 a change in the schedule is going to be really that
24 pertinent to matters that we are looking at in light of
25 the terms of the contract.

1 MS. KLEER: Q. While we have this
2 exhibit in front of us, Ms. Howes, I have a question to
3 you relating pages 156 and 157 of the transcript.

4 At line 14 on page 156 I asked a question
5 of Dr. Everett who is also with the Manitoba Hydro, and
6 I will just read it.

7 One final question in relation to
8 cumulative impacts. Does Manitoba Hydro
9 believe that the logical extension of the
10 goal that you have it stated in item A of
11 your cumulative impact study exhibit is
12 that the entire Conawapa project,
13 including the transmission lines in
14 Ontario, without which the Conawapa
15 wouldn't be able to transmit power to
16 Ontario, that those things ought to be
17 considered together; in other words, that
18 the Manitoba-Ontario border ought not to
19 be a bar to a full cumulative impact
20 assessment that looks at the Ontario
21 portion of the transmission lines.

22 And Dr. Everett answers:

23 The Corporation is going to make an
24 effort with respect to cumulative, to
25 looking at the generating facility and

1 all of the rated transmission facilities;
2 and we are going to give the fullness of
3 that a shot with respect to cumulative
4 impacts.

5 With respect to the border, I think
6 you used relevant word "bar", I am not
7 quite sure where you are coming from on
8 that front, but in terms of the
9 transmission line and that issue on our
10 side of the border, yes, we will try to
11 factor that into cumulative impacts.

12 And this is the portion I am particularly
13 interested in:

14 And I would have to guess that it
15 would be reasonable to extend that
16 thinking into Ontario and put a full
17 picture together, and I believe just as
18 we are trying on Hudson Bay to give it a
19 shot on that front, we could do it on the
20 transmission front. We could try that,
21 that's correct.

22 Now, you would agree, Ms. Howes, it
23 indicates at least on the part of Dr. Everett of
24 Manitoba Hydro that there is some willingness to look
25 at the form of a cumulative impact assessment for

1 transmission, looking at both Manitoba and Ontario
2 transmission; is that correct?

3 MS. HOWES: A. I think we have committed
4 to do an environmental assessment for the transmission
5 component within Ontario, and it's very difficulty from
6 this transcript to understand exactly what Dr. Everett
7 had in mind in terms of cumulative effects assessment
8 for a transmission line. I am not sure what exactly he
9 means by this.

10 Q. All right, we will have to wait and
11 see then what they do with this.

12 I have a question for you, Mr. Snelson,
13 following up from Mr. Starkman's cross-examination in
14 relation to the Niagara extension. I believe you
15 indicated under the managed surplus case that you might
16 build the tunnels for Niagara and then you would build
17 the new powerhouse at a later date. That was one
18 potential way of dealing with that development; is that
19 correct?

20 MR. SNELSON: A. Yes, that is a
21 possibility.

22 Q. Now, is it fair to say that the other
23 hydraulic plants such the Mattagami extensions, Little
24 Jackfish, Patten Post, don't have that interim step
25 available so in some sense they are less flexible than

1 the Niagara extensions option?

2 A. They have some different
3 characteristics. I don't think that's necessarily a
4 difference in the flexibility, they are just a somewhat
5 different nature.

6 Q. All right. So you don't think that
7 that is a characteristic of flexibility of the Niagara
8 extensions that the other plants do not have?

9 A. Let me give you an example. The
10 addition of the additional generating capacity at
11 Niagara which is the construction of a new powerhouse,
12 is adding capacity to be able to use the water more
13 quickly over a shorter period of time, whereas the
14 tunnel is what makes the water available at
15 Queenston where the full head is available.

16 But just coming back to the powerhouse,
17 that is a building of a generating plant to provide
18 additional capacity to use the water more quickly.

19 The Mattagami, which has extensions of
20 the three existing sites, is a more flexible way of
21 adding capacity because the provision already exists in
22 those three existing powerhouses to add the additional
23 turbine generators, and that has been provided for in
24 the past.

25 So it isn't a question of building a new

1 powerhouse to put in that additional capacity, it's a
2 question of merely adding generating units in places
3 that have been provided for them in the past.

4 Q. Just another question that is not
5 connected to any of the other thoughts I have been
6 following.

7 Mr. Snelson, when did Ontario Hydro's
8 system planning division become aware that the DSP was
9 going to go through the EA process?

10 A. I believe the Corporation was
11 considering, through the preparation of the DSP, what
12 was the appropriate process for its approval. Whether
13 that constituted a decision prior to the board of
14 directors approving the plan, I don't recall. But it
15 was certainly under discussion for some months prior to
16 the actual preparation and submission of the DSP.

17 Q. You commented yesterday when we were
18 discussing the EPTAP report that the writers of the
19 EPTAP report might not have been aware what the process
20 was to be following their review of the DSPS or the
21 draft DSPS. Is it fair to say that during the regional
22 consultation and provincial organization consultation
23 meetings that you didn't know then that the DSP would
24 go through the environmental assessment review process?

25 A. We knew that the Environmental

1 Assessment Act provisions would have to be met, but we
2 didn't know how and what sort of hearings might be
3 organized to do that and whether they would be on a
4 planned basis or a project basis only.

5 Q. All right. Thank you.

6 Again, a question for you, Mr. Snelson,
7 in relation to common elements.

8 Would you agree that by incorporating
9 fixed common elements into the 1989 DSP and into the
10 DSP Update, that Ontario Hydro limited the range of
11 alternatives under consideration to it?

12 A. No.

13 Q. Why do you say that? It seems to me
14 self-evident that that is the case.

15 A. No. Because the range of
16 alternatives that are under consideration includes all
17 of the options that we have discussed, and we have
18 discussed demand management options, we have discussed
19 various supply options that are not part of the plan.
20 And so there is a very wide range of options that have
21 been under consideration as part of this process.

22 Q. But you could have, for instance,
23 suggested that a partial amount of hydraulic be
24 developed and that might be one variation, but because
25 you had common elements; namely, 1,400 to 1,800

1 megawatts of hydraulic, you didn't consider that as a
2 viable option?

3 A. It was not one of the options that we
4 put to our board of directors, but we have shown the
5 effect of that, of there being no hydroelectric
6 approvals in the no-approvals case.

7 Q. I believe this question would be for
8 you, Mr. Shalaby. Is it fair to say that Ontario Hydro
9 in developing cases for the DSP and the DSP Update did
10 not draw any explicit links between the representative
11 plans that were studied in the demand/supply option
12 study and those that were actually put forward in the
13 DSP and the Update?

14 MR. SHALABY: A. No. I think we
15 indicated that we took a lot of the conclusions and
16 lessons that were learned from the representative plans
17 into the formulation of the Demand/Supply Plan Update
18 and the Demand/Supply Plan itself. We built on that
19 knowledge and that experience into the formulation of
20 the Demand/Supply Plan.

21 Q. But in the representative plans you
22 would agree that you looked at a much broader range of
23 options than ultimately appeared in your plans that you
24 put forward in the DSP and in the Update?

25 A. Yes, I agree.

1 Q. And it wasn't a conclusion of the
2 demand/supply option study that you should incorporate
3 common elements such as hydraulic or the Manitoba
4 Purchase; is that correct?

5 A. There was indication that, for
6 example, plans that have a mix of supply and demand
7 perform better than plans that are completely supply or
8 completely demand.

9 The option of the Manitoba was not
10 specifically -- we reached no specific conclusions on
11 the Manitoba Purchase from the option study.

12 Q. All right. One of the plans that was
13 discussed briefly in the Update, perhaps it shouldn't
14 be called a plan, but one of the matters that was
15 considered was a distributed generating system.

16 I would like to ask you, Mr. Snelson,
17 whether or not a distributed generating system would
18 also be, in your view, an alternative method of
19 carrying out the undertaking?

20 MR. SNELSON: A. There are various ways
21 of producing distributed generation systems, but
22 clearly there are ways of distributing generation
23 differently and they would be alternative ways of
24 carrying out the undertaking.

25 Q. All right. Now, you certain

1 certainly didn't give a great deal of consideration in
2 terms of actual analysis that we see in any of your
3 documentation as to that particular alternative way; is
4 that correct?

5 A. It was addressed during the
6 demand/supply option study. That particular way of
7 designing a system was addressed then, and we have
8 re-examined some of that work as part of the planning
9 questions prior to preparing the Update.

10 Q. But you didn't give it as much
11 consideration, for instance, in terms of the analysis
12 as you would have to the update fossil or to the update
13 nuclear?

14 A. It was one of the questions that was
15 considered prior to the preparation of the Update.

16 Q. I don't think that answers my
17 question. You didn't give it as much consideration?

18 A. There was not as much analysis done
19 of it. It wasn't carried through to the same degree as
20 some of the other plans.

21 MS. KLEER: I believe those are all my
22 questions. Thank you very much, panel.

23 THE CHAIRMAN: Thank you, Ms. Kleer.

24 Mr. Rogers?

25 MR. ROGERS: Thank you, Mr. Chairman.

1 CROSS-EXAMINATION BY MR. ROGERS:

2 Q. Ladies and gentlemen, I have a few
3 questions about the Update, which is Exhibit No. 452.
4 That is the only document that I think I will be
5 referring to during this short examination.

6 What I would like to do is to spend just
7 a few moments to look at the key features of the Update
8 that you have filed with this Board and try to relate
9 those features to some of the evidence which we have
10 heard over the past, I guess, almost two years now
11 having to do with the original application, and see if
12 we can apply some of the things that I at least have
13 learned during this hearing to the key features of the
14 Update.

15 [10:42 a.m.]

16 Could you turn, please, to the executive
17 summary which I hope to use as a reference point to
18 keep this simple.

19 I hope I don't offend the Board by the
20 simplicity of the approach, but I want to just
21 summarize some of the elements that we have gone over
22 over the past little while.

23 Now, ladies and gentlemen, I will address
24 this to the panel and you may select among yourselves
25 who is best capable of answering it. I am not even

1 sure I have met all of you over the past
2 year-and-a-half.

3 I see the executive summary that - and
4 this is in paragraph 4 - that the current load forecast
5 has affected the planning environment in two ways; the
6 substantial lowering of the primary load forecast
7 defers the need date for major new supply, and this was
8 a major factor in your change, the broader uncertainty
9 bandwidth associated with the load forecast has
10 resulted in a requirement for a greater degree of
11 flexibility than existed in the original Demand/Supply
12 Plan.

13 From that paragraph I gather that there
14 is now a broader uncertainty bandwidth; i.e., more
15 uncertainty about the forecast? Mr. Shalaby; is that
16 correct?

17 MR. SHALABY: A. That is correct.

18 Q. And the second feature I draw from
19 that paragraph is that because of that there is a need
20 for greater flexibility in Ontario Hydro's planning?

21 A. That's correct.

22 Q. Now, I would like to look at some of
23 the evidence we have heard over the past many months to
24 see how some of the things we have heard can fit those
25 new features.

1 First of all, dealing with this question
2 of greater uncertainty. It would seem to me that
3 uncertainty, although I guess you can't do much about
4 it, is something that is not very desirable? The more
5 certain the future is the better from a planning
6 perspective?

7 A. I'll go along with that.

8 Q. So that we should be looking for
9 technologies which will add to the certainty of your
10 supply rather than add to the uncertainty which has
11 increased since this hearing began?

12 A. That would be a desirable feature,
13 yes.

14 Q. You know that I am representing the
15 gas industry in these hearings and so you won't be
16 surprised to learn that I am going to suggest to you
17 that natural gas is a fuel which offers that kind of
18 increased certainty?

19 A. I wouldn't be surprised, no. We
20 declared our inability to be surprised anymore, so we
21 stick to that.

22 Q. You should try sitting over here
23 sometimes.

24 Let's just summarize some of the things
25 that we have established during the hearing, and I

1 don't think there is much controversy about this, Mr.
2 Shalaby.

3 Dealing with natural gas, we know that
4 gas combustion turbine units are a proven technology?

5 A. I accept, yes.

6 Q. I mean, they are use in many
7 utilities around the world and in North America?

8 A. That's correct.

9 Q. Also, natural gas can be burned in
10 traditional fossil-fired plants, large plants like the
11 Hearn plant here in Toronto?

12 A. Yes.

13 Q. In fact, Ontario Hydro used to burn
14 gas there for a time?

15 A. Yes.

16 Q. Natural gas is consumed in large
17 generation plants even today in the United States to
18 produce electricity?

19 A. Yes.

20 Q. With free trade, of course, the
21 Americans have much freer access to our natural gas
22 reserves to burn to produce electricity in the United
23 States?

24 A. I don't have detailed knowledge of
25 that, but that's what I read, yes.

1 Q. All right. There is no natural gas
2 being consumed on your system now to produce
3 electricity except as a starter fuel I think; is that
4 right?

5 A. Yes.

6 Q. We established I think through one of
7 the panels, and I have forgotten which one it was, that
8 generally speaking diversity of supply on an electrical
9 system; that is diversity of technologies, is generally
10 speaking a desirable thing?

11 A. Yes.

12 Q. Because of the diversity of supply of
13 technologies you have greater reliability in the
14 system, generally speaking?

15 A. It has desirable characteristics,
16 yes.

17 Q. Ontario Hydro does not consume
18 natural gas now to produce electricity?

19 A. Yes.

20 Q. And if it began to do so that would
21 add diversity of technologies to your supply?

22 A. More importantly diversity of primary
23 energy source.

24 Q. All right. That would be a desirable
25 thing?

1 MR. SNELSON: A. The desirability of
2 diversity has to be tempered with what is the cost of
3 the diversity.

4 Q. Of course.

5 A. So if you have two fuels of equal
6 price, then diversity is a zero cost option, but
7 depending on the difference in the price then you may
8 have to pay something for it.

9 Q. Thank you, Mr. Snelson. Yes, that's
10 right.

11 There appears to be lots of natural gas
12 available in our country nowadays?

13 MR. SHALABY: A. Yes.

14 Q. Your colleague, Mr. Snelson, pointed
15 out that cost is an important consideration?

16 A. It is.

17 Q. We know that Ontario Hydro's evidence
18 in this hearing is that its forecast of gas costs has
19 been declining over the period of examination by this
20 Board?

21 A. That is correct.

22 Q. And Ontario Hydro's forecast of
23 future gas costs is lower now than it was when we began
24 these hearings?

25 A. That's right.

1 Q. So that the cost consideration that
2 Mr. Snelson was concerned about appears to be more
3 favourable now at least than it was at the beginning of
4 these proceedings?

5 A. That is right, yes.

6 Q. We know from the evidence that we
7 have heard, and I don't think this came from you, Mr.
8 Shalaby, but that there are means available at least to
9 reduce the uncertainty of future gas costs through
10 innovative contracting methods?

11 A. There were discussions of certain
12 hedging and packaging that would make long-term supply
13 more favourable to utilities, yes.

14 Q. Right. And thereby minimize the cost
15 hopefully to Ontario Hydro?

16 A. Reduce the cost, yes.

17 Q. And increase the certainty of supply?

18 A. Well, I think our evidence was that
19 we don't have very much experience. So we are
20 developing more and more knowledge of the gas industry,
21 but...

22 Q. Right, I understand that, and I am
23 really just trying to summarize some of the things that
24 we have learned about natural gas during the hearing.

25 You would agree with me I think that

1 while Ontario Hydro has a lot to learn, and you have
2 been quite candid about that, it does appear that there
3 are contracting techniques available which would secure
4 future supply for Ontario Hydro?

5 A. I can only accept that there are
6 contracting techniques available. The extent to what
7 security they give at what price, I can't pass any
8 judgment on that.

9 Q. We will leave it there. We also have
10 learned that certain gas technologies, at least CTUs,
11 have short lead times?

12 A. Yes.

13 Q. I.e., they can be built in a relative
14 hurry compared to other supply side options?

15 A. Yes.

16 Q. To the extent that they can be built
17 more quickly there is less risk that the capital costs
18 will get out of control because of unforeseen increases
19 in interest rates, for example?

20 A. It has less exposure to that
21 particular uncertainty, yes.

22 Q. All right, thank you.

23 Now, the other element that we have
24 mentioned here in your executive summary in paragraph 4
25 is the flexibility that is more desirable because of

1 the uncertainty, Mr. Shalaby?

2 A. Yes.

3 Q. Flexibility, to me, from a supply
4 side consideration implies something that can be built
5 quickly?

6 A. That is a feature that will
7 contribute to flexibility, yes.

8 Q. Something that could be built at
9 relatively low capital cost?

10 A. Yes.

11 Q. Something that can be geographically
12 located in a variety of places?

13 A. Yes.

14 Q. Something that has relatively small
15 land use requirements?

16 A. Yes.

17 Q. And all four of those are met by
18 natural gas technologies; aren't they?

19 A. Natural gas can be used in a way that
20 is as you have described, yes.

21 Q. So it can be added quickly; right?

22 A. Yes.

23 Q. At relatively low capital cost?

24 A. Right.

25 Q. It is relatively flexible in its

1 location on your system depending upon where you need
2 the supply?

3 A. It is more flexible than larger
4 fossil stations or nuclear stations, yes.

5 Q. Thank you. You can add it in smaller
6 increments?

7 A. That's correct.

8 Q. Which gives you more planning
9 flexibility?

10 A. It does.

11 Q. And it has smaller land use
12 requirements than the traditional large scale supply
13 options?

14 A. Generally, yes.

15 Q. Thank you very much.

16 A. I am going to get full marks for
17 answering yes, yes, for 35 questions in a row.

18 Q. I want to go for a world record, so
19 keep it up. [Laughter]

20 Let's move down to the next paragraph in
21 your executive summary, paragraph B, and here is one of
22 the essential features of the Update.

23 You point out that demand management is
24 now a much more important aspect of your planning and
25 that the expectations for demand management was

1 increased by about 4,300 megawatts by the year 2014,
2 and this was reflecting Ontario government policy and
3 also the legislative change which was designed to allow
4 Ontario Hydro to offer incentives for customers to
5 switch from electricity to natural gas?

6 A. Yes.

7 Q. I would like to talk to you about
8 that aspect of your Update for a moment. This is
9 really demand management we are talking about here;
10 isn't it, Mr. Shalaby?

11 A. That is correct, yes.

12 Q. Now, fuel switching is one major
13 component of Ontario Hydro's demand management
14 strategy?

15 A. It is.

16 Q. As I understand it, the fuel
17 switching impetus really came from a change in
18 government policy about a year ago? Last June, as a
19 matter of fact, June of '91?

20 A. I think that and the favourable price
21 advantage of gas over electricity in certain markets,
22 but certainly the legislative initiative had a lot to
23 do with it, yes.

24 Q. We learned from a previous panel that
25 the potential - potential - fuel switching savings is

1 in the order of 3,100 megawatts by the year 2000. Are
2 you familiar with that number?

3 A. It doesn't surprise me. I am not
4 going to argue about it.

5 Q. I can tell you this was discussed in
6 Volume 55 of the transcript and the panel then, I have
7 forgotten who was on it, helped me by telling me that
8 the order of magnitude of the savings is roughly
9 equivalent, a little less, but close to the entire
10 Pickering nuclear complex, just to put this in
11 perspective.

12 Does that sound about right to you?

13 A. That's about right describing 3,100
14 megawatts, yes.

15 Q. So the potential savings by the year
16 2000 is less but close to the output of the entire
17 Pickering nuclear facility?

18 A. I think the megawatts are comparable.
19 The energy production is probably considerably less.

20 Q. I agree.

21 A. We discussed that with other
22 intervenors in this panel.

23 Q. I am talking just about the capacity
24 savings.

25 A. We look at both capacity and energy

1 in our business, but in capacity, you are correct, yes.

2 Q. Of course you do and so you should.

3 I am just talking about capacity at the moment, though,
4 just to help put it in perspective.

5 A. Yes.

6 Q. Now, back on September the 10th
7 actually of 1991 after that plan was announced I was
8 examining Hydro witnesses and I asked about what
9 concrete programs Ontario Hydro was contemplating to
10 bring about this huge fuel switching potential, and at
11 that time I think it is fair to say that the response
12 was that it was pretty early in the day and they were
13 still in the planning process. I think I fairly
14 summarized the gist of evidence there.

15 I am advised, ladies and gentlemen, that
16 Bill 118 which is the enabling legislation received
17 third reading about a week ago, on June the 8th. Can
18 anyone confirm that that is so?

19 MR. SNELSON: A. I can't confirm the
20 date, but I can confirm that it is within about a week.

21 Q. All right. I even got a positive
22 answer from Mr. Snelson. This is beyond my wildest
23 dreams.

24 So we know then it has received third
25 reading and all that remains now is for it to receive

1 Royal Proclamation and then it is the law of the land.

2 MR. SHALABY: A. If that's all that is
3 needed.

4 Q. I believe so.

5 A. I don't know what all the steps would
6 be, but yes.

7 Q. Can somebody on the panel help me
8 then as to what progress you have made over the past
9 year since I last asked about this?

10 What concrete plans does Ontario Hydro
11 now have to bring about this fuel switching potential
12 especially now that the bill, the enabling legislation,
13 has received third reading?

14 A. I think we indicated to other
15 intervenors that Hydro does not have concrete plans at
16 this time yet.

17 We are still in the early planning stages
18 of working with allies, including the gas companies, of
19 course, who are going to be a major partner in this
20 venture, trying to understand the nature of programming
21 that would be required to deliver that kind of fuel
22 conversion, but nothing that could be described as
23 concrete plans at this time.

24 The reasons we gave was that the
25 legislation was still being changed and debated and the

1 extent of powers and mandation is still being
2 discussion and so on, and until that it is firmed up
3 concrete plans will not be formulated.

4 [10:55 a.m.]

5 Q. Can you help us as to - I apologize
6 if this has been asked before - what progress has been
7 made in the past year since I last asked about this to
8 at least advance Ontario Hydro's thinking on this
9 project?

10 A. I don't have firsthand knowledge of
11 the exact discussions or concept discussions on what
12 market segment to go to, for example, and what allies
13 to work with. I don't have specific knowledge, but I
14 would assume that work with gas companies and with
15 municipal utilities and so on is ongoing.

16 Q. I think I can confirm that that is
17 so.

18 A. And has broadened to include fuel
19 switching, for example. But I don't have specific
20 knowledge of exactly what has taken place.

21 Q. Does Ontario Hydro have a discrete
22 unit of people who are working on this project now, do
23 you know?

24 A. I don't know that.

25 Q. Well, you say that you have been

1 having discussions with the gas industry, among others,
2 which I think is correct, and when I discussed this a
3 year ago with the panel I was told that there really
4 are four key players here, there is the government,
5 there is Ontario Hydro, there is the gas industry, and
6 then there is the municipal utilities, the grass roots
7 distributors of electricity. Those are the players
8 that you see, Mr. Shalaby, as being essential?

9 A. The customer is one that we shouldn't
10 forget either.

11 Q. Of course, yes. But these are the
12 four groups that will influence the customer behaviour.

13 A. Generally speaking, correct.

14 Q. And the four entities from whom
15 leadership is required to bring this about?

16 A. Generally speaking, yes.

17 Q. I was told a year or so ago that the
18 first three of those, of the four, were quite
19 enthusiastic about fuel switching, that is it was
20 government policy obviously, the gas industry obviously
21 is in favour of it, Ontario Hydro is in favour of it,
22 but there was some hesitancy on the part of the
23 municipal electric utilities in this area. Is that
24 still the case?

25 A. I think talking about the municipal

1 utilities as one singular group that have the same
2 sentiment is probably oversimplification, some have
3 enthusiasm and some don't. But in general I think that
4 is the group that will probably not be categorized as
5 enthusiastic as the other three.

6 Q. Can anybody on the panel help me as
7 to what has been done over the past year or two to
8 encourage the municipal utilities to cooperate in
9 bringing about the maximum fuel switching potential?

10 A. I think it is the same kind of
11 discussion as we have had with municipal utilities
12 regarding conservation programs. The concerns they
13 have is the revenue loss that would occur if
14 conservation programs take place, and the same concern
15 occurs when you fuel switch, there will be revenue loss
16 and there will be capital facilities sitting idle that
17 would result in increases in the rates.

18 So the discussions between Hydro and the
19 municipal utilities are similar in the area of fuel
20 switching as they are in the area of conservation or
21 efficiency improvement, dealing with that issue of
22 revenue loss. That's a biggy.

23 Q. Yes, I understand that. And I think
24 we all can understand why that would be a concern to
25 the municipal utilities.

1 You do agree, however, that it is
2 important that the appropriate steps be taken to see
3 that the municipal utilities fully cooperate in
4 bringing about the maximum economic fuel switching
5 potential?

6 A. That is the intent of Ontario Hydro's
7 demand management program, yes.

8 Q. Now, I asked last year about this
9 time what marketing type programs were being phased out
10 by Ontario Hydro to remove incentives to induce people
11 to use electricity in competition with natural gas, and
12 I was told that the water heater tune-up program was, I
13 think, on hold and being considered as one of the
14 programs you might eliminate. Are you familiar with
15 that?

16 A. That's my recollection of the
17 evidence as well, yes.

18 Q. I understand, and you don't need to
19 go into this document, but just looking very briefly at
20 a document filed this year before the Ontario Energy
21 Board for Ontario Hydro's rate increase for 1993, they
22 are talking here about a water heater tune-up program
23 being in place in 1992.

24 Is that the same program, Mr. Shalaby, do
25 you know?

1 A. I don't know the details. But I
2 think the evidence we gave in Panel 4 is that water
3 heaters in areas that have natural gas perhaps is a
4 different category than water heaters in areas that do
5 not have natural gas or any other opportunity for fuel
6 switching that is as visible or as easy.

7 So I think pursuing electrical efficiency
8 in areas that do not have natural gas is still in the
9 spirit of the programs that we want to offer.

10 Q. I agree. I agree. But it is Ontario
11 Hydro's policy then not to activity encourage the
12 consumption of electricity to heat water or heat space
13 where natural gas is available?

14 A. I believe that is true, yes.

15 Q. I am instructed that, as an example
16 of this concern that I have about the municipal
17 utilities protecting their own economic interests in a
18 way which might be contrary to the spirit of the fuel
19 switching policy of Ontario Hydro, I am instructed that
20 the London PUC has some program under consideration
21 whereby it will switch gas water heating, or it will
22 try to induce the customers using natural gas to heat
23 water, to induce them to switch to electricity by means
24 of some time-of-use metering technology, and that
25 Ontario Hydro is a supporter of that program.

1 Now, does anyone on the panel know
2 anything about that program?

3 A. No. We have had concepts of putting
4 in a dual water heater that would heat the water only
5 in the nighttime and not use electricity in the daytime
6 as a potential for load shifting. Whether that is a
7 test of that concept or something different, I have no
8 idea. But the idea of time-of-use with water heating
9 is being explored by putting dual water tanks, heat the
10 water only at night and use it in the morning.

11 Q. And would you agree with me at least
12 that it seems contrary to Hydro's stated policy if
13 there are programs in place designed to induce people
14 to switch from natural gas to electricity for the
15 purpose of heating water?

16 A. I would be surprised if Ontario Hydro
17 is rigorously pursuing switching from gas to
18 electricity.

19 Q. That's because it would be contrary
20 to your stated policy concerning fuel switching?

21 A. Yes.

22 Q. Thank you.

23 A. But having said nothing surprises us
24 anymore, I still -- some municipal utilities may pursue
25 things that they perceive to be in their best interest.

1 Q. Ontario Hydro I take it will use all
2 legitimate means at it's disposal to ensure that the
3 municipal utilities programs are compatible with
4 Ontario Hydro's policy concerning fuel switching.

5 A. To the extent we can, yes.

6 Q. You do exercise a fair degree of
7 control through your regulatory function, don't you?

8 A. There are rate-setting authorities
9 and other authorities, yes.

10 Q. Thank you. Let's move along then to
11 the next item on you are executive summary, and that is
12 item 4C where your point out that one of the major
13 changes in the Update is the substantially higher
14 qualities of non-utility generation that can be
15 achieved due to the rapid growth of the non-utility
16 industry, non-utility generation industry?

17 A. Yes.

18 Q. What has happened here is that we
19 have had a tremendous response to non-utility
20 generation in the province?

21 A. Tremendous response to requests for
22 proposals from Hydro, yes.

23 Q. Better put, thank you.

24 In fact, we learned through the course of
25 this hearing that Ontario Hydro's forecast of

1 non-utility generation by the year 2000 increased from
2 your forecast in 1987/88 of 300 megawatts to a forecast
3 of 3,100 megawatts in your 1991 forecast?

4 A. Not to get into arguments, I think
5 the nature of the forecast was different and the
6 categories of things that are being forecast is
7 different, but I will agree that the projection for
8 non-utility generation increased during that time
9 period, yes.

10 Q. And non-utility generation to a large
11 extent is dependent upon natural gas as the fuel
12 source?

13 A. The majority of fossil fuel that
14 would be used is natural gas, yes.

15 Q. One of the reasons that the response
16 to your offer to take non-utility generation was so
17 outstanding was because of the favourable price of
18 natural gas now and as forecast in the future?

19 A. That's one of the major reasons.

20 Q. We also agreed, I think, that we are
21 presently existing in what the witnesses described as a
22 window of opportunity for incremental non-utility
23 generation because of favourable gas costs.

24 A. I understand it is an opportunity for
25 non-utility generators to lock-in favourable gas terms,

1 yes.

2 Q. Thank you, very much. It is fair to
3 say, I think, Mr. Shalaby, that natural gas therefore
4 plays a vital role in Ontario Hydro's Demand/Supply
5 Plan that is now before this Board?

6 A. Absolutely.

7 MR. SNELSON: A. I believe I said so in
8 my direct evidence.

9 Q. Thank you, Mr. Snelson.

10 Am I right that from an environmental
11 standpoint natural gas does not produce sulphur
12 dioxide, Ms. Howes?

13 MS. HOWES: A. Yes, at least during the
14 operation. I would assume that there is some sulphur
15 dioxide produced at the front end of the fuel cycle.

16 Q. Taken out of the fuel before it's
17 consumed?

18 A. Yes.

19 Q. So it produces sulphur, doesn't it?
20 You produce sulphur that way? You take sulphur out of
21 the gas, isn't that how you reduce the sulphur dioxide?

22 A. Yes.

23 Q. And does sulphur have some commercial
24 utility?

25 A. Yes, it does.

1 Q. So there is no sulphur dioxide
2 produced when you burn natural gas and you have a
3 by-product that's useful, namely sulphur?

4 A. That's true.

5 Q. Am I right as well that there are no
6 solid wastes produced or very few solid wastes produced
7 by the consumption of natural gas?

8 A. Relative to the other fossil options,
9 yes.

10 Q. Ms. Howes, do you think it's fair to
11 say that natural gas has a high degree of public
12 acceptability from an environmental point of view as
13 compared to other fuels for the production of
14 electricity?

15 A. I think Dr. Tennyson in her direct
16 evidence suggested that yes, indeed, natural gas has
17 some public support, yes.

18 Q. Well, some public support.

19 Dr. Tennyson, would it be fair to say
20 that natural gas has a relatively high degree of public
21 support relative to nuclear and coal fuels?

22 DR. TENNYSON: A. As I said in my direct
23 evidence, based on our consultation activities, that
24 natural gas is preferred over the other fossil fuels.

25 Q. Thank you.

1 MR. SNELSON: A. I would just comment
2 that we have had very vigorous opposition from the City
3 of Toronto to restarting Hearn on natural gas and
4 certain groups within Toronto, so it's not uniform.

5 Q. Is that because of its environmental
6 impact or because they feel that natural gas could
7 better be used in other applications?

8 A. The experiences I had in that regard
9 were with respect to environmental implications.

10 Q. Do you think there would be a bigger
11 outcry if you are talking about burning coal?

12 A. We weren't talking about burning
13 coal, so I don't know.

14 Q. Mr. Snelson, you do know. It would
15 be a much bigger outcry; wouldn't it?

16 A. I would expect it to be so but I
17 don't know that.

18 Q. If you were talking about building a
19 nuclear plant down at the foot of Yonge Street, it
20 would be even a bigger outcry; wouldn't it?

21 A. I don't think we would propose that.
22 [Laughter]

23 Q. Thank you, very much.

24 Let me ask one last question and then I
25 think I am finished. We are nearly through this phase

1 of the proceedings. Ontario Hydro has now had its say
2 and I guess the intervenors will be given an
3 opportunity to produce some evidence, which hopefully
4 will be of use to Ontario Hydro and to this Board.

5 I represent the gas industry, do you have
6 any suggestions as to what evidence might be useful
7 coming from my clients to Ontario Hydro to assist you
8 in your planning process and hopefully to this Board?

9 A. I think we have put forward the
10 evidence that we feel is necessary to support our plan.
11 I presume you will make the decisions yourselves as to
12 what evidence you feel is appropriate to bring forward.

13 Q. Yes, we will. I won't force you on
14 this, but this is not an adversarial process. We are
15 in a planning process together here and I just want to
16 give you the opportunity, if you have any ideas as to
17 what kind of evidence from the gas industry would be
18 useful to Ontario Hydro, to tell me.

19 If you have no suggestions, that is fine.

20 MRS. FORMUSA: I think we will take your
21 question and think about it and get back to you.

22 MR. ROGERS: That is fine.

23 MRS. FORMUSA: If that's okay?

24 MR. ROGERS: Certainly, that is fine.

25 Mr. Chairman, that concludes my

1 questions. Thank you very much for your indulgence.

2 It's difficult to be a part-time
3 intervenor and I appreciate the Board's cooperation in
4 allowing some flexibility in the scheduling. And as
5 well your staff has been most helpful, particularly Ms.
6 Morrison. Thank you, very much.

7 Thank you, ladies and gentlemen.

8 THE CHAIRMAN: Thank you, Mr. Rogers.
9 Mr. Watson?

10 MR. H. WATSON: Mr. Chairman, I will be
11 two or three minutes setting up.

12 THE CHAIRMAN: That's okay. Just take
13 your time.

14 MR. H. WATSON: Thank you for your
15 patience, Mr. Chairman.

16 I also want to thank Mr. Rogers for
17 getting the witness panel in such a good mood. I am
18 sure this will be a lot easier as a result of that.

19 Perhaps I could just make a comment about
20 the materials we will be relying on.

21 Firstly, I have provided, and I hope the
22 Board has before them, a number of exhibits that we
23 will be referring to.

24 As well, there are I believe four
25 interrogatories that we will be using, and I have

1 provided a copy of those. They are in the order that I
2 intend to deal with them, so hopefully that will make
3 it easier.

4 CROSS-EXAMINATION BY MR. H. WATSON:

5 Q. The first set of questions will be
6 essentially from Volume 148 of the transcript and
7 Exhibit 74. So I would suggest that those be at hand
8 and be left open for the next few moments.

9 The first reference is to page 26146 of
10 Volume 148, 26146. I will only be briefly just asking
11 Mr. Snelson to confirm that the planning criteria that
12 Hydro is replying upon are those set out and at page 29
13 of Exhibit 74.

14 Am I right on that, Mr. Snelson? So
15 essentially, I would ask, assuming Mr. Snelson is in
16 agreement with me, for everybody to turn to --

17 MR. SNELSON: A. Yes.

18 Q. If everybody with turn to page 29 the
19 of Exhibit 74.

20 We note that paragraph 1.7 states:

21 The primary criteria which must be met
22 for evaluating and developing recommended
23 plans are: Customer satisfaction,
24 reliability standards, safety
25 requirements and standards, environmental

1 requirements and standards, low cost of
2 electricity service, social acceptance,
3 technical soundness and flexibility.

4 Paragraph 1.8 then sets out the secondary
5 criteria which are to be considered and
6 may influence the recommended plans.

7 I would refer you to page 26148, so flip
8 the page in Volume 148, where at line 11 Mr. Snelson
9 stated -- we are in the same volume of the transcript
10 just one page over, line 11:

11 The primary criteria in concept are
12 things that we must meet. They are
13 requirements. They must be met.

14 Mr. Snelson, am I therefore correct that
15 in evaluating and developing Hydro's plans that the
16 primary criteria were requirements that had to be met?

17 MR. SNELSON: A. Yes, but if you read
18 the full paragraph then you find that I make it plain
19 that the concept of the distinction between primary and
20 secondary criteria is clear, but in practice the
21 distinction is less so.

22 Q. The primary criteria, are they
23 criteria that have to be met?

24 A. That is the concept, yes.

25 Q. In practice that's not what happens?

1 A. They all must be met to at least a
2 sufficient degree.

3 Q. The principle is, though, that these
4 criteria must be met?

5 A. That is the concept, but as I have
6 indicated, there are some areas of gray in the actual
7 application.

8 Q. So, in fact, sometimes in practice
9 Ontario Hydro would not meet its own criteria?

10 A. We aim to meet these criteria and
11 some of these are absolutes and others are more
12 relative types of considerations.

13 So, for instance, things like
14 flexibility, low cost, are things where you don't draw
15 clear distinctions and say this level of the criteria
16 is met and this level of the criteria isn't.

17 So there are some areas of interpretation
18 within these criteria, but we aim to meet these primary
19 criteria.

20 Q. So the objective is that these
21 criteria must be met acknowledging --

22 A. With those qualifications the
23 objective is to meet these criteria.

24 Q. So I can say then, and you would
25 agree, that social acceptance is one of the criteria

1 you must meet?

2 A. With the qualifications that I have
3 indicated, yes.

4 Q. Can I conclude that if Hydro didn't
5 have social acceptance of its proposed plans that it
6 would not proceed with those plans?

7 A. It certainly has to have an adequate
8 degree of social acceptance.

9 Q. I refer the Board and everyone to
10 page 27, the page before in Exhibit 74, in particular
11 paragraph 5.1 and I am looking under that heading
12 General Strategic Principles.

13 Again, page 27 of Exhibit 74. I am
14 looking at 1.1 under 5.1 which states:

15 The primary objective of demand/supply
16 programs is to contribute to customer
17 satisfaction.

18 I would also refer the Board to the next
19 page over, page 29, of Exhibit 74, at the bottom of
20 page under the title Primary Criteria where it is
21 stated:

22 Customer satisfaction is a primary
23 objective of Ontario Hydro... and then
24 there is a reference to principle 1.1 which we just
25 went over.

1 Mr. Snelson, is it correct to say that
2 the primary objective of the DSP and the Update is to
3 contribute to customer satisfaction?

4 A. No, I don't believe so. There is a
5 distinction of words here that I think is a difficulty
6 with the way the strategy is written and we have
7 addressed it before, and that is if you go back to page
8 27, then you find that under 5.1 there are strong words
9 associated with many of those strategic principles.

10 1.1 uses the word primary objective, 1.2
11 uses the word paramount and 1.3 uses the word vital,
12 and these are all indications of high priority and I
13 don't think it is a useful exercise to try and
14 establish any ranking among them.

15 Q. So you wouldn't try to rank them.
16 Would you agree that customer satisfaction is a primary
17 objective, a primary objective?

18 A. It is a very high priority for
19 Ontario Hydro.

20 Q. In fact, a primary objective is the
21 language you have used or Hydro has used?

22 A. We have used that language, but you
23 have to read the strategy in its entirety and not just
24 take one element out of context.

25 Q. If I can refer the Board again in

1 Volume 148 to page 26147 which is, again, right where
2 we were before. Starting with the second last
3 paragraph on that page, I believe it is Mr. Snelson's
4 testimony, where he says:

5 However, one of the first criteria,
6 and it is given considerable prominence
7 in the strategy, is customer
8 satisfaction.

9 Now, of course, I was going to ask you if
10 that in fact really wasn't the primary objective. I
11 presume at this point you would agree that it is a
12 primary objective of Ontario Hydro?

13 A. It is a primary objective, yes.

14 Q. Thank you. Continuing on with that
15 particular quotation, the next sentence, it says:

16 You will find very little direct
17 discussion of customer satisfaction in
18 our evidence. Now, this is because to
19 achieve customer satisfaction we believe
20 we have to achieve a satisfactory or
21 better than satisfactory performance on
22 almost all of other criteria. For
23 instance, if we had a plan that was not
24 reliable, then that wouldn't be
25 consistent with customer satisfaction.

1 If we had a plan that failed to gain
2 social acceptance, then that wouldn't be
3 satisfactory with respect to customer
4 satisfaction.

5 Am I correct in stating, Mr. Snelson,
6 that if there is not social acceptance of Hydro's plans
7 that there would also not be customer satisfaction?

8 Is that the logical conclusion to draw
9 from your testimony?

10 A. Yes.

11 Q. Similarly, if Hydro does not meet
12 environmental requirements or standards you wouldn't
13 have customer satisfaction?

14 A. I believe that is the case, yes.

15 Q. I would now like to take a look at
16 the public feedback program questionnaire, and I
17 understand from talking to Ms. Kleer this morning that
18 there has been some cross-examination on this.

19 I have to confess that I haven't read Ms.
20 Kleer's transcript from yesterday, but I will do my
21 best hopefully not to ask similar questions.

22 Perhaps I could ask you to turn to page
23 57 of Exhibit 535. This is a questionnaire for
24 potential sites, existing sites and I would note -- the
25 particular page I am interested in, page 57, which

1 would be I suppose the first page of questions in the
2 questionnaire, this page is identical to the first page
3 of the other two questionnaires; is that right, Dr.
4 Tennyson?

5 DR. TENNYSON: A. That's my
6 understanding.

7 Q. I have had a look at them and they
8 appear to be identical to me. Could you have a brief
9 look just to ensure that that is in fact the case if
10 you are not sure?

11 A. Yes, it is my understanding that
12 there are common questions to them both and then there
13 are some additional ones where we had illustrative
14 sights.

15 Q. That's absolutely right. The page I
16 am going to be looking at in particular is this first
17 page of questions which I guess I am still trying to
18 ascertain whether it is identical to the other two just
19 for the sake of avoiding unnecessary questions.

20 A. Let's see. I can't see any
21 difference. I am looking at pages 52 versus, what, 57.
22 Is that what you are asking?

23 Q. I don't know whether this has been
24 dealt with before the Board before, but there are three
25 questionnaires.

1 A. Yes, and then there is one on page
2 63.

3 Q. Maybe you could just confirm this
4 just in case this hasn't been dealt with.

5 There is one questionnaire that was given
6 to people generally, it was a general questionnaire
7 that was used for people generally in your information
8 centres; a second that was used where there were
9 existing Hydro projects; and a third where there was to
10 be -- where projects had been proposed?

11 A. They hadn't been proposed. Those are
12 illustrative --

13 Q. Well, in the initial DSP where the
14 sites were identified.

15 A. But they were illustrative really.

16 Q. I will take it. But that was the
17 purpose of the three questionnaires or the differences?

18 A. Yes.

19 Q. All right. I hope we have
20 established that the first page was the same for all
21 three.

22 A. I hope so.

23 Q. In question 1A Hydro asked the
24 respondents to indicate whether particular
25 considerations were important to them, correct?

1 Are you not familiar with this?

2 A. Yes, I am. Yes, they did ask that.

3 Q. Sorry, I just wanted to make sure I
4 was asking the right person.

5 A. Yes.

6 Q. Then subsequently in 1B you have
7 asked the respondents to rank these considerations?

8 A. That's correct.

9 Q. The first consideration you ask the
10 respondent to rate the importance of and then rank was
11 "to include a mix of demand management/conservation/
12 energy efficiency and new power generation."

13 Wouldn't you agree, Dr. Tennyson, that
14 the average citizen looking at that might not know what
15 was involved in the term, say, for example, energy
16 efficiency or new power generation? Do you see any
17 problem with that?

18 A. We had, I think you are aware, we had
19 information centres.

20 Q. Yes, I am.

21 A. There were numerous panels explaining
22 all aspects of the plan. There were people from all of
23 the various areas in Ontario Hydro to discuss the
24 various components of them and all of these terms would
25 have been discussed, defined, explained.

1 So people that were -- and people were
2 asked to fill out a questionnaire. So people that were
3 filling out a questionnaire were doing it from the
4 basis of having been informed of what these various
5 components would be.

6 Q. You are telling me that, in other
7 words, as somebody was filling it out somebody would
8 have been advising them as to the particular meaning of
9 certain terms of --

10 A. No, I didn't say that. What I said
11 was--

12 Q. I am trying to understand what you
13 are saying.

14 A. --they had some information given to
15 them at the centres, we discussed them, they were taken
16 around through all the exhibits, they could ask
17 numerous questions, we sat and discussed various things
18 if they wanted to and people spent a great deal of time
19 learning about the programs, the various components of
20 the plan, the history, the process and then everyone
21 was asked, people were asked that came through would
22 they fill out a questionnaire.

23 Q. I presume that different people would
24 have spent different amounts of time, of course, in the
25 centre before filling out a questionnaire?

1 A. I think you can assume that.

2 Q. So I guess what I am still getting
3 back at here is, on the face of this questionnaire
4 recognizing, and I accept this as a given, that there
5 was a centre and that there was information available
6 to people and if they took the initiative they could
7 get that kind of information.

8 In other words, if they walked into the
9 centre and asked somebody they could learn about what
10 new power generation meant?

11 A. If I may interrupt.

12 Q. Certainly.

13 A. As I recall the way the centres
14 operated, and we usually do this, people coming in were
15 met at the door and were advised of what was available
16 in the centre and who was there.

17 So I think they were well informed of
18 what was available to them.

19 Q. I have no doubt that they would have
20 been informed as to what was available in the centre.

21 I suppose what my concern would be is
22 that not everybody who picked up that questionnaire
23 would understand the language that was in, for
24 instance, this first question, notwithstanding that
25 information might have been available has they pursued

1 it?

2 A. I find it hard to agree. I can't
3 remember the details, but people go through, they are
4 asked to fill out one. In filling out a questionnaire,
5 if you are doing it at a table in a room and if you
6 have a question about what something means you could
7 certainly ask for it. Otherwise, all of these various
8 things were discussed.

9 Q. Okay. I will leave it at that.

10 A. But there may be --

11 Q. I am interested I suppose in how the
12 questionnaire stands on its own. The rest of it is
13 unfortunately -- I mean, I accept what you are saying,
14 but I am interested in how the questionnaire stands on
15 its own and as the--

16 A. Well, if I may --

17 Q. --question indicated - excuse me -
18 the question indicated, my concern was that somebody
19 reading that questionnaire might have difficulty in
20 knowing what those terms meant.

21 I have got your answer, okay.

22 A. If I could just elaborate.

23 Q. All right.

24 A. If you are designing questionnaires,
25 and I have done quite a bit of that in my career,

1 certainly if you are mailing out a questionnaire to
2 people and you think they don't know much about a topic
3 you have to design different questions.

4 If, in fact, you are providing
5 information, sharing it at a centre and going around,
6 you are then able to ask different questions.

7 So there is not some sort of monolithic
8 approach to this.

9 Q. So you would agree then that on its
10 face these questions on their face, they don't provide
11 necessarily information sufficient for the average
12 person to understand the question?

13 A. I did not say that. I said
14 information was provided at the centres and through our
15 other information activities so that these questions
16 are perfectly appropriate.

17 Q. I accept that.

18 A. And could have been answered and
19 were.

20 Q. I won't pursue this question much
21 further, but I am just curious because I think what you
22 are saying to me is that -- for instance, you wouldn't
23 have mailed this questionnaire out; is that what you
24 are saying?

25 A. I didn't say that. I said that you

1 have to design things differently depending on. You
2 were trying to make the statement that people--

3 Q. Let me put the question --

4 A. --couldn't understand this and I am
5 telling you that they could understand it.

6 Q. Let me put this question to you,
7 then. Would you have mailed this questionnaire out in
8 the current form? Would this have been appropriate for
9 that type of use?

10 A. It would have depended on what other
11 information was available.

12 Q. If there is no other information
13 available would you have made this questionnaire out in
14 this form?

15 A. I really can't answer that because we
16 would have sent it out with the plan. I mean, it is
17 hypothetical. I would have to review all the questions
18 myself.

19 Q. All right. We will leave at that.
20 Was this questionnaire translated into Cree, Ojibway or
21 Ojibway/Cree?

22 A. Unfortunately to my knowledge it
23 wasn't. It is the demand/supply materials that were
24 translated. There was a video made, but in terms of
25 this I don't know the answer to that.

1 Q. In Exhibit 535, unfortunately I don't
2 know if I can find it right at the tip of my fingers,
3 but there is a reference to certain materials being --

4 A. That's what I just quoted to you.

5 Q. I think you have given me that. It
6 didn't seem to indicate the questionnaire, but you are
7 saying you are not sure whether in fact that occurred?

8 A. I would doubt it.

9 Q. You would doubt it.

10 A. Simply because the materials have
11 been translated. There has been consultation done
12 based on those materials. So I would --

13 Q. Could I have an undertaking to get
14 that information?

15 A. Sure.

16 Q. It is not a difficult question, I
17 don't think.

18 A. No.

19 Q. Thank you.

20 THE CHAIRMAN: Undertaking number?

21 THE REGISTRAR: .33.

22 ---UNDERTAKING NO. 684.33: Ontario Hydro undertakes to
23 determine whether the questionnaire was
24 translated into Cree, Ojibway or
Ojibway/Cree.

25 DR. TENNYSON: And that was, was this

1 questionnaire translated; is that correct?

2 MR. H. WATSON: Was it translated into
3 Cree, Ojibway or Ojibway/Cree.

4 Q. If we assume for a moment that in
5 fact the questionnaire wasn't translated, which we
6 don't know right now, but hypothetically speaking,
7 wouldn't you agree that somebody whose first language
8 wasn't English might have difficulty with the language,
9 for instance, of 1A, the question we just reviewed?

10 DR. TENNYSON: A. It would depend how
11 knowledgeable one was in English. Granted, if someone
12 had no knowledge of English, yes, that would be very
13 difficult.

14 Q. I guess my question was even somebody
15 who had some English. My view would be that there
16 would be some difficulty in understanding that
17 question. Would you agree with that?

18 A. I'm sorry, your question was with
19 respect to --

20 Q. I think I would take it beyond simply
21 somebody who can't speak English at all to somebody who
22 perhaps speaks English as a second language.

23 I guess by that I mean somebody whose
24 language skills in English aren't strong and I am
25 suggesting to you that it would be very for the person

1 to understand, for instance, what question 1A was all
2 about.

3 A. If somebody's language skills were
4 not strong, then they might have.

5 Once again, at a centre or in discussing
6 aspects of the plan or any of Hydro's activities we
7 endeavour in all of our communications to try and make
8 what we are doing or proposing as understandable as
9 possible. That includes explaining to people in
10 language that they can understand what our activities
11 are all about and then they are able to voice their
12 concerns.

13 Certainly I have met with, you know, many
14 people on these topics and have been able to
15 communicate with them.

16 Q. I wouldn't doubt that for a moment.
17 I guess my concern about this is that this would
18 require the person who is in there who had the language
19 difficulty to come forward and, of course, make
20 somebody aware that, in the environment information
21 centre or whatever, that they were having a problem
22 with the language; wouldn't it?

23 A. Yes.

24 Q. Thank you. I don't know if you are
25 going to be able to answer this question because I am

1 not sure how familiar you are with this questionnaire,
2 but would you agree that there are no use of the words
3 hydraulic generation or hydroelectric generation in the
4 questionnaire?

5 Would you believe to answer that?

6 A. I recall reviewing it and I think you
7 are right.

8 THE CHAIRMAN: There is reference to
9 water.

10 MR. H. WATSON: There is reference to
11 water, yes.

12 DR. TENNYSON: But I guess one of the
13 things I would like to point out is that the design of
14 this questionnaire had both closed and open-ended
15 questions.

16 In terms of discussing the various
17 options, in terms of discussing the plan, all
18 components of it would be discussed.

19 If people had any concerns about any
20 aspect of or questions about any of the various options
21 those would be addressed and, in fact, the results
22 indicate that people did discuss hydraulic, for
23 example.

24 [11:35 a.m.]

25 Q. I agree with you. There were

1 open-ended questions and certainly somebody could have
2 chosen to speak, and I'm sure they did.

3 A. And did.

4 Q. I am sure that did happen.

5 Would you agree notwithstanding though
6 that there isn't a straightforward question in the
7 questionnaire to determine whether hydroelectric is
8 still a preferred option of the public?

9 A. I would agree that particular
10 question was not asked.

11 Q. Thank you. May I refer the Board and
12 witnesses to page 22 of Exhibit 535.

13 THE CHAIRMAN: Perhaps if you are going
14 on to something else we should take the morning break.

15 MR. H. WATSON: That is fine, Mr.
16 Chairman.

17 THE REGISTRAR: Please come to order.
18 This hearing will recess for 15 minutes.

19 ---Recess at 11:36 a.m.

20 ---On resuming at 12:00 p.m.

21 THE REGISTRAR: Please come to order.
22 This hearing is again in session. Be seated, please.

23 THE CHAIRMAN: Mr. Watson?

24 MR. H. WATSON: Thank you, Mr. Chairman.
25 As I asked right before the break, if people could turn

1 to page 22 of Exhibit 535, a quick reference here to
2 the middle column, and of course my interest with
3 respect to Moosonee and Moose Factory together there,
4 you will note that the number of visitors to the centre
5 was 126 and that there were no questionnaires filed.

6 Q. Those numbers would be accurate, I
7 presume, Dr. Tennyson?

8 DR. TENNYSON: A. Yes.

9 Q. Without trying to assess
10 responsibility for the fact that no questionnaires were
11 in fact filled out in Moosonee or Moose Factory, would
12 you agree, Dr. Tennyson, that fact that no
13 questionnaires are available with respect to those
14 communities downstream from potential development in
15 the basin presents a gap in Hydro's feedback process?

16 A. Well, certainly, in terms of the
17 component that is represented by questionnaire
18 responses, clearly if they weren't filled out then we
19 don't have that information.

20 Q. So you agree there is a gap then in
21 your information?

22 A. To the extent that those
23 questionnaires haven't been filled out.

24 Q. I would now like to refer to the
25 first of the four interrogatories that I am going to be

1 looking at. This is Interrogatory 10.33.16.

2 THE REGISTRAR: That's .52.

3 ---EXHIBIT NO. 683.52: Interrogatory No. 10.33.16.

4 THE CHAIRMAN: Thank you.

5 MR. H. WATSON: Q. They should be right
6 on the top of your interrogatories. Has everybody
7 found it?

8 In this interrogatory we asked the
9 following question:

10 Explain the rationale for retaining in
11 the Update the plan to develop hydraulic
12 potential rather than major supply
13 options. Providing all updated avoided
14 cost data and documentation used in
15 support of this rationale.

16 In answer to this question we received
17 the following:

18 The reasons for preferring
19 hydroelectric resources to major supply
20 in the Update, Exhibit 452, are unchanged
21 from those reasons indicated in
22 Interrogatory 6.26.183 and the
23 demand/supply planning strategy, Exhibit
24 74.

25 We again reviewed Hydro's answer to

1 Interrogatory 6.26.183, which was provided in answer to
2 our interrogatory and which is attached to the second
3 page of the pile of interrogatories that I have given
4 you.

5 THE CHAIRMAN: It probably should also be
6 given a number.

7 THE REGISTRAR: It was previously filed.
8 Do you want a new number?

9 THE CHAIRMAN: In this panel?

10 THE REGISTRAR: No.

11 THE CHAIRMAN: Give it a number for this
12 panel.

13 THE REGISTRAR: .53.

14 ---EXHIBIT NO. 683.53: Interrogatory No. 6.26.183.

15 MR. H. WATSON: Q. In this answer Hydro
16 restated priority direction No. 4, which of course
17 relates to the hydraulic potential, and then the answer
18 goes on to explain how the DSPS strategy was
19 formulated. And as you will see in the last paragraph
20 of the answer to the interrogatory, Hydro outlined
21 their public consultation process, and in the fourth or
22 fifth last line of that paragraph stated:

23 Public opinions surveys indicated that
24 had many people prefer new hydroelectric
25 developments believing that it is

1 environmentally benign, low cost,
2 available, and good for the economy
3 because it is an indigenous renewable
4 resource.

5 And then in referring to all of their
6 public consultation process stated, in that last sense:

7 The information obtained through this
8 process was used in formulating the
9 demand/supply planning strategy.

10 Now, I would just point out that this
11 answer is what we received in answer to our question,
12 explain the rationale for retaining in the Update the
13 plan to develop hydraulic potential.

14 Am I correct in thinking, Mr. Snelson -
15 or whomever would answer this question - that the
16 rationale for retaining the hydraulic option in the
17 Update was because Hydro's public opinion surveys
18 indicated that new hydraulic development is
19 environmentally benign, amongst other characteristics?

20 MR. SNELSON: A. I think we have
21 indicated that generally we believe that the public
22 view of hydraulic development, is that it is relatively
23 beneficial compared to other alternatives and has less
24 environmental impact.

25 We have of course given our own views as

1 to the specific environmental impacts that we know
2 hydroelectric development has.

3 Q. Would you agree in fact, though, that
4 this comment about the public viewing it as
5 environmentally benign is quite contrary to the result
6 of your own public feedback program?

7 DR. TENNYSON: A. No. In terms of the
8 general public, and we have discussed this and I did
9 indicate it in direct evidence, that there is still the
10 perception that hydraulic is somewhat more
11 environmentally benign. I think the words in the
12 feedback report are somewhat less environmentally
13 damaging than other options.

14 Q. Can I refer to you page 29 of Exhibit
15 535. I am looking at, in particular, under the heading
16 the hydroelectric option, 5.7.4, where Hydro states:

17 Participants in the public feedback
18 program voiced a number of concerns with
19 respect to hydraulic generation and it is
20 role in the DSP.

21 And skimming down to the first sentence
22 of the next paragraph:

23 The impact of hydraulic development on
24 Aboriginal people was of particular
25 interest. Specific comments to

1 environmental impact, for example,
2 mercury contamination, changes in water
3 levels and flow rates; effects on fish
4 and wildlife, et cetera; economic
5 development; social impacts, for example,
6 changes to lifestyles, culture,
7 recreation and tourism; effects of
8 work-force, influx, access roads, effects
9 on traditional hunting, trapping and
10 fishing areas, et cetera; the cumulative
11 impacts, for example, basin effects of
12 Moose River/Mattagami Complex, of a
13 number of relatively small individual
14 hydraulic projects were in issue.

15 Wouldn't you agree that this doesn't seem
16 to suggest that the public believes that new hydraulic
17 development is environmentally benign?

18 A. If you read the next paragraph at the
19 time it says:

20 There is a remains a perception that
21 that hydraulic generation is somewhat
22 less environmentally damaging than other
23 generation options.

24 I pointed that out as well in my direct
25 evidence and in the options comparison, I pointed out

1 the other concerns that have been identified.

2 Q. That statement is an interesting
3 statement. There remains a perception that hydraulic
4 generation is somewhat less environmentally damaging
5 than other generation options.

6 Earlier you said that it was somewhat
7 more environmentally benign. It seems to me there is a
8 bit of a difference between those terms that you have
9 used.

10 A. I don't think so, but if you do...

11 Q. For instance, I guess just to clarify
12 this from my perspective then. If you say something is
13 more environmentally benign, would you agree that seems
14 to suggest that it has a more positive connotation than
15 to simply state that there are a number of concerns
16 that people have over hydraulic generation. There may
17 be less concerns from your research than, say, with a
18 nuclear option, but notwithstanding, there are still
19 concerns?

20 A. And that's exactly what we have
21 always stated.

22 Q. That is fine.

23 Your research indicates that the public
24 is concerned about the effect of hydraulic development
25 on Aboriginal peoples?

1 A. There is some concern, yes. I think
2 you are well aware of that.

3 Q. Page 37 of Exhibit 535, under the
4 heading Hydraulic Option, Hydro provided some
5 indication of the changes occurring in the perception
6 of the hydraulic option since Hydro did its original
7 public consultation. It states there:

8 The hydraulic option has been viewed
9 positively by many participants in the
10 planning process due to perceptions of
11 abundant supply, low cost, and relatively
12 low level of environmental impact. Over
13 time, however, there has been increasing
14 recognition of the potential social and
15 environmental implications of hydraulic
16 development, particularly for Aboriginal
17 people.

18 So I am correct then in assuming from
19 listening to you and from this piece of evidence, that
20 Hydro recognizes that by its own research that the
21 public has serious reservations about hydraulic
22 generation? Can I assume that?

23 A. That isn't what I said. I think that
24 it is very clear, the statement that's made in here is
25 exactly what we have discussed. And I am sure this was

1 discussed on Panel 6 as well where the hydraulic option
2 was discussed exhaustively.

3 Q. This particular document wasn't
4 available actually in Panel 6.

5 A. No, but certainly I think there was
6 evidence on potential impacts and concerns.

7 Q. Certainly in terms of potential
8 impacts. I was thinking about the public consultation
9 factor.

10 Would you agree that your evidence shows
11 then that there is at least a growing concern with
12 respect to hydraulic generation?

13 A. I think what I would say is there is
14 increasing awareness, like it says here, that of the
15 potential, social and environmental impacts on
16 Aboriginal people, that generally that is becoming
17 apparent.

18 Q. So is the answer to my question, yes?
19 I asked if there was a growing concern with respect to
20 hydraulic generation?

21 A. I don't know, would you say growing
22 concern? I said there is an increasing recognition of
23 potential impacts. There are concerns in some areas,
24 certainly, but in general there is still the
25 perceptions that I said about hydraulic being less

1 environmentally damaging overall in comparison to other
2 options.

3 Q. So that the public perceives that
4 there are environmental impacts that will result from
5 hydraulic generation, but they are fewer in number than
6 those with respect to other major supply options?

7 A. I don't think we number them. I
8 think they are different. And I think that as we have
9 discussed, there are different areas of the province,
10 there would be potentially different impacts, different
11 characteristics of the option.

12 You are talking hydraulic, we have talked
13 about the difference in perception between
14 rehabilitation over the development of a new site, for
15 example, the various characteristics of the options as
16 Mr. Snelson has discussed would make it different
17 impacts, and I think we are all aware of that, and they
18 are to be addressed and are addressed in our
19 project-specific studies.

20 Q. I would be inclined to agree with
21 that perhaps the number isn't the important thing.
22 It's to look at the impacts and the impacts that they
23 have on particular people in that instance; isn't it?

24 A. Exactly.

25 Q. Can I have you now refer to Exhibit

646, page 3, paragraph 9, third line down in particular
I am looking at in paragraph 9.

THE CHAIRMAN: What page?

MR. H. WATSON: This is page 3 of Exhibit
646.

Q. Just briefly I want to refer to a
couple of different bits of evidence before making my
point.

As I say, paragraph 9, midway through
that paragraph it says:

Changes in circumstances, including
changes to the forecasts and expectations
underlying that planning process, make
planning a dynamic and iterative
process for integrating options into
demand/supply plans.

Now notwithstanding Ontario Hydro's
admissions that planning is a dynamic and changing
process that needs to be regularly revisited and
updated, Mr. Snelson states at the top of page -- this
is Volume 148 of the transcripts, top of page 26115,
same volume of transcript we have been in, he stated:

"The demand/supply planning strategy
was adopted in early 1989 and has guided
all of our demand/supply planning since

1 that time, and from that strategy, which
2 is Exhibit 74, there are five priority
3 strategic directions which are outlined
4 on pages 6 and 7 of that exhibit and they
5 have been reproduced as page 1 of our
6 overhead package which is Exhibit 682.

7 And while since this strategy was
8 developed there has been quite a lot in
9 the way of changing information which is
10 used in planning, and the plans
11 themselves have also changed, for
12 instance, the changes that have been
13 documented in the Update Plan, 1992
14 Update. During that time the priority
15 strategic directions have not changed and
16 they have guided our planning through
17 that whole period.

18 Mr. Snelson, you acknowledge that there
19 has been a lot of changing information which has been
20 used in planning and that the plans themselves have
21 also changed as they were documented in the Update
22 Plan; is that correct?

23 MR. SNELSON: A. Yes, that's what I
24 said.

25 Q. Would you agree hypothetically that

1 if the circumstances underlying the planning process
2 changed, that the planning priorities previously used
3 might also have to be changed?

4 A. That would depend upon what changes
5 took place in the underlying planning environment.

6 Q. In this case we are just talking
7 hypothetically. Would you agree in a hypothetical
8 situation that there could be changes sufficient to
9 warrant changing those directions?

10 A. Well, it would depending upon, as I
11 say it would depend upon what were the changes.

12 There obviously could be changes that
13 would cause them, but you haven't defined them.

14 Q. Okay. Wouldn't you agree that if
15 public opinion is to play such an important part in
16 Hydro's planning, which I think we have already
17 established, that these strategic directions should
18 reflect that opinion?

19 THE CHAIRMAN: Are you suggesting that
20 one of the three suggestions does not reflect that
21 opinion?

22 MR. H. WATSON: I am going to suggest
23 that, Mr. Chairman. Right now I guess I am looking for
24 confirmation of my question which is really a step
25 before that step, of course.

1 MR. SNELSON: Public opinion is one of
2 the factors that would be taken into account in
3 determining the strategy and the strategic directions,
4 and it was taken into account in determining the
5 strategy.

6 MR. H. WATSON: Q. In fact, customer
7 satisfaction which would include social acceptance is a
8 primary objective of Hydro; correct?

9 MR. SNELSON: A. Yes, and we had
10 discussion of that before the break.

11 Q. We established that.

12 In light of the fact that the strategic
13 elements behind the DSP were based, in part, on public
14 consultation, wouldn't you agree that in the absence of
15 public support for the hydraulic option, that Hydro
16 should revise priority strategic direction No. 4?

17 A. No.

18 Q. You agree with the principle, though,
19 that if there isn't the public support, that in fact
20 that should occur?

21 A. I said that public opinion is one of
22 the factors taken into account in developing strategy.

23 Q. So if you determined that there
24 wasn't social acceptance of a particular --

25 THE CHAIRMAN: Now you are shifting

1 ground there. There is a difference, I perceive a
2 difference between social acceptance and public
3 opinion.

4 MR. H. WATSON: Q. Does Hydro see a
5 difference between those two things?

6 [12:15 p.m.]

7 DR. TENNYSON: A. Yes.

8 Q. Can you explain the difference?

9 A. As I have indicated in previous
10 testimony, the concept of social acceptance is
11 something that is determined through public
12 consultation, through government review and through
13 hearings such as this. So it isn't only established
14 through opinion surveys.

15 I think the notion that public
16 consultation involves a variety of activities and it is
17 research into this area and it is one component that
18 contributes to it.

19 Q. I would agree. I was perhaps using
20 the word in a wider sense than you were.

21 So based on our public consultation,
22 though, whatever form that takes, we determine there
23 isn't social acceptability, I presume you would go back
24 and look at your priority strategic directions; is that
25 correct?

1 MR. SNELSON: A. I believe that, for
2 instance, Dr. Tennyson referred to this hearing as
3 being one of the processes of establishing public
4 acceptance and if the result of this hearing was to be
5 that the approved range for new hydroelectric
6 development was zero, then in that hypothetical
7 situation I suspect that we would have to go back and
8 revise our strategy.

9 I think it would be meaningless to carry
10 on with that particular element of the strategy in that
11 circumstance.

12 Q. Is that the only sort of answer you
13 will take in terms of whether something is -- whether
14 the public consultation has indicated disapproval of
15 that particular direction?

16 A. I think Dr. Tennyson has discussed
17 the degree to which the public feedback process
18 indicates acceptance of that direction.

19 Q. Okay. I am going to move along.
20 I would ask the Board to look to the second
21 interrogatory that I provided which I suppose if you
22 consider the answer to our first interrogatory as
23 another one it is actually the third page in. It is
24 Interrogatory 10.33.10.

25 THE REGISTRAR: That's .54.

1 MR. H. WATSON: In fact, this one may
2 already be Exhibit 683.1. I could be wrong on that,
3 but it might be worth checking.

4 THE REGISTRAR: You are absolutely
5 correct.

6 MR. H. WATSON: Sorry for not advising
7 you sooner. For those who are following along, it is
8 actually -- the graph I am interested in is in Exhibit
9 682 at page 25 as well.

10 Q. Our question in this interrogatory
11 was:

12 Based on Ontario Hydro assessment of
13 the various risk factors, what is the
14 probability of there being a surplus in
15 each year of the planning period. Please
16 provide all data related to the
17 determination of those probabilities.

18 You will see by looking at the answer to
19 our question that I believe all we received was the
20 graph rather than any supporting material.

21 Mr. Dalziel, could you briefly just
22 explain how you arrive at those probabilities?

23 MR. DALZIEL: A. I will try. They are
24 using -- let me back up a little bit.

25 You are familiar with the load forecast

1 bandwidth and that that bandwidth is based on
2 probabilities.

3 Q. Okay.

4 A. The full load forecast bandwidth --
5 by using the word full, by definition you can think of
6 it as ranging from something that has zero probability
7 or zero per cent to something that has 100 per cent
8 probability of occurrence. So it is going to give you,
9 you know, a very wide band.

10 The load forecast bandwidth is defined by
11 the 10th percentile and the 90th percentile.

12 When the people are putting together the
13 load forecast, first I believe they develop what is
14 called the median load forecast and it is defined as
15 the 50th percentile or the most likely.

16 Then for each year of the load forecast,
17 when they run the uncertainty model, they get a
18 distribution of loads about the median load forecast.
19 That is described as a probability distribution and it
20 ranges then in each year from zero to 100 per cent.

21 So what we can do then is knowing then
22 the full range of the load forecast and the
23 year-by-year probabilities or set of probabilities in a
24 given year, then we can look at what we have called our
25 projected load meeting capability and we define that as

1 the existing system with the hydraulic program, the
2 Manitoba Purchase and the purchase non-utility
3 generators.

4 That's really the projected supply side
5 load meeting capability and that has with it then year
6 by year a megawatt value, a total amount of megawatts.

7 Then we can look on a year-by-year basis
8 as to where within the load forecast bandwidth the
9 megawatt value associated with the projected load
10 meeting capability, where it lies within the full load
11 forecast bandwidth.

12 When you do that there is also associated
13 then with each megawatt value within the load forecast
14 bandwidth a probability of its occurrence or a
15 probability of loads being up to but not exceeding that
16 value.

17 That is the kind of information then that
18 has been used to develop the figure that we are looking
19 at here.

20 Q. Okay. Thank you, Mr. Dalziel. Part
21 of our concern here is that we find that when we get
22 answers to interrogatories that we don't always get as
23 much information as we would like. Thank you for that
24 explanation.

25 In our your direct evidence, Mr. Dalziel,

1 I think I am correct in stating that you said that in
2 the year 2000 there is approximately an 85 per cent
3 probability that the projected load meeting capability
4 will exceed the demand that is forecasted for that
5 year; is that correct?

6 A. Well, do you want me to look at this
7 graph--

8 Q. Yes, have a look at the graph.

9 A. --and interpret it for the year 2000.

10 Q. Sure.

11 A. Also, as I look at this I am seeing
12 another unfortunate thing and that is the upper load
13 90th percentile line appears not to really lie quite in
14 the middle between .8 and 1 which it should, but it
15 doesn't mean that the information is incorrect on the
16 graph.

17 If I go up from the year 2000 and I am
18 looking at the top line which corresponds to the
19 Update, I see that when I reach that line and I go
20 across then to the vertical scale I am estimating that
21 it is somewhere close to 90 per cent of the load
22 forecast.

23 Q. It is a little bit higher than I
24 thought.

25 A. As it is shown in the graph, yes, it

1 is around 90 per cent.

2 Q. I am not looking for an accurate
3 number. I am trying to get a sense of this
4 probability.

5 A. What this graph could be telling you,
6 the way you can interpret this graph then for the year
7 2000 is that in the year 2000 the probability that the
8 load meeting capability, the projected load meeting
9 capability would be adequate to the 90th percentile or
10 that it would be adequate to the 90th percentile of the
11 load forecast bandwidth.

12 Q. So that gives us the probability that
13 it will exceed the demand for that year?

14 A. Well, the probability that the load
15 forecast is describing is it is saying that the
16 probability of loads being in the year 2000. I don't
17 know, we would have to look at the forecast, but let's
18 just say that the forecast of the 90th percentile in
19 the year 2000, let's say it was 30,000 megawatts, I
20 don't what it is, but what that is telling us is that
21 the probability of demand being 1, 2, 3, 4, 5, 6, 7,
22 8,000 megawatts, and you can count it all the way up to
23 30, the probability of the load being 30,000 megawatts
24 or less is 90 per cent.

25 So in that same year, then, what we are

1 saying here is the probability of the projected load
2 meeting capability meeting the 88th or the 90th,
3 whatever that particular percentile corresponds to,
4 what we are reading is that the projected load meeting
5 capability in the year 2000 is capable of meeting loads
6 up to the 88th or the 90th percentile of the load
7 forecast bandwidth. Then you have to go and look in
8 the load forecast bandwidth to see that the actual
9 megawatt value is.

10 Q. So in the year 2000 approximately 70
11 percentile -- 2005?

12 A. 2005?

13 Q. Yes, sorry.

14 A. That's about right.

15 Q. And 2008 about, say, 63 percentile?

16 A. That looks about right.

17 Q. Thank you, Mr. Dalziel. You have
18 acknowledged in your direct evidence, Mr. Dalziel, and
19 I will give you the page number if you need it, that
20 under the median load forecast there is a possibility
21 of a substantial surplus. Am I correct in saying that?

22 A. That's correct.

23 Q. And, in fact, that a substantial
24 portion of the upper load forecast would be covered by
25 the projected load meeting capability; correct?

1 A. A substantial portion of the
2 bandwidth between the median and upper would be
3 covered, that's correct.

4 Q. Okay. I presume that if there is
5 such a surplus in the system until approximately
6 2009 -- have I got that right?

7 A. That's about the time period of the
8 surplus.

9 Q. That not all of the approvals being
10 sought by Ontario Hydro will be necessary in order to
11 meet the median load forecast; am I correct in that?

12 A. They may not be necessary.

13 Q. With respect to the median load?

14 A. That's correct.

15 Q. Okay, thank you.

16 If I could have you turn to Exhibit 646,
17 page 4, paragraph 13. I am looking about the fourth
18 line from the bottom of that paragraph where Hydro
19 states:

20 There is reduced concern about meeting
21 upper load forecast because the load
22 meeting capability of the existing system
23 combined with that of the Manitoba
24 Purchase and the priority options in the
25 1992 Update is sufficient to meet most of

1 the demand anticipated under the upper
2 load forecast for the next 10 years.
3 Now, Hydro is planning to the median load
4 forecast; correct, Mr. Dalziel?

5 A. Well, we have described it earlier,
6 at least in Exhibit 452 as planning around the median.

7 Q. Okay, that's fair enough. Yet the
8 load meeting capability of the system is sufficient to
9 meet much of the demand anticipated under the upper
10 load forecast for the next number of years. I think
11 you used 10 years; is that correct?

12 A. That is, I think, correct.

13 Q. Mr. Dalziel, one of the major
14 planning questions that Hydro addressed in arriving at
15 the Update was whether there were particular advantages
16 in reducing the surplus; correct?

17 A. That's correct.

18 Q. In Volume 149 of the transcript, so
19 we are changing volume to transcript here, at page
20 26309, and I am looking at line 25.

21 I believe it was your evidence, Mr.
22 Dalziel, you said -- it is at the bottom of the page:

23 Here we considered varying or at least
24 deferring to varying degrees all of the
25 demand/supply options which were in place

1 over the period of the projected surplus.
2 The deferred options were generally
3 restored to their target amounts by the
4 time the new supply would be required.
5 A small question but, Mr. Dalziel, could
6 you explain precisely what you meant by the word
7 varying? What did you mean there?
8 I think I understand that, but I would
9 like it clarified, if you could?
10 A. I think we looked at -- in this
11 particular time we were asking examining this planning
12 question we simply took a look at all of the
13 demand/supply options and moved them out a little
14 further in time. So some may have been moved out two
15 or three years, relative to others they may have been
16 moved out four and five.
17 Q. So by varying you just mean
18 deferring; is that essentially what you meant there?
19 A. That's correct.
20 Q. You went on to state in your evidence
21 that this was simple an illustrative approach to
22 managing the surplus?
23 A. Yes.
24 Q. But that you found the costs were
25 lower and that electricity prices were lower under this

1 approach; am I correct in that understanding?

2 A. Yes.

3 Q. So I presume you would agree there
4 are some advantages in deferring some of the
5 demand/supply options during the surplus periods?

6 A. Yes.

7 Q. Could I have you now turn to page
8 26327, same volume, where at line 3 Mr. Dalziel
9 commented on Hydro's approach to managing the surplus,
10 illustrative approach. He said:

11 Essentially the options for managing
12 the surplus are to defer demand
13 management, defer non-utility generation,
14 defer the hydraulic program and the
15 mothball plants on the existing system.

16 Skimming down to line 12, you stated:

17 Much of the hydraulic capacity was
18 deferred in time. For the purpose of
19 this illustrative way of managing the
20 surplus it was assumed further that the
21 Little Jack Fish project would be
22 cancelled, but that the rest of the
23 hydraulic programs were recovered by the
24 time that major supply was required.

25 Now, Mr. Dalziel, I am correct in stating

1 that these plans are with respect to the update nuclear
2 and the update fossil plans?

3 A. That's correct, with surplus
4 management.

5 Q. Okay, thank you. In this approach,
6 although you have stated that capacity would be
7 deferred, in fact that Little Jack Fish would be
8 cancelled; is that correct?

9 Is that the correct understanding of
10 that?

11 A. It was an assumption that was made in
12 putting to together the illustrative approach of
13 managing the surplus.

14 Q. Okay. Can I ask you just to turn
15 back one page, then, in your evidence to page 26326.
16 Actually I might be in the wrong book here. Volume --
17 sorry, bear with me for a moment.

18 No, that's the right volume. Page 26326,
19 line 5, you stated:

20 First of all, Hydro recognizes that it
21 must manage the surplus if it arises and
22 as it arises. The options to manage the
23 surplus will be determined by Hydro over
24 time as the decisions need to be made.

25 With time we will have more information

1 on the actual load growth experience and
2 the yield from the demand management and
3 the NUG programs, for example. So we
4 don't want to make these decisions before
5 they have to be made.

6 Therefore, I take it, that it is Hydro's
7 position that decisions with respect to managing the
8 surplus should be put off as long as possible; am I
9 correct in that understanding?

10 A. I don't know if it is so much as
11 putting off as long as possible, as being put off until
12 an appropriate time for which the decision that needs
13 to be made can be made.

14 Q. Maybe I could refer you to direct
15 evidence of Mr. Shalaby and I think Mr. Snelson also
16 supported this or gave similar type of evidence where
17 they stressed the importance of not making decisions
18 until they had to be made so that the best decision
19 could be made, I presume, in order to incorporate
20 current technology, information that would be available
21 at a later date.

22 I would refer the Board to page 26262 and
23 this is in Volume 148, I believe. Maybe I have that
24 wrong. Yes, it is in the prior volume, and if you will
25 bear with me I have one more lengthy quote that I would

1 like to read in and then I will get to my point, I
2 think. Looking at line 9 on that page where Mr.
3 Shalaby gave this evidence, he said:

4 It is fair to say that this is not a
5 step-by-step process and that planning is
6 a dynamic and iterative process. I guess
7 the Chairman confirmed that as well this
8 afternoon, so I don't have to go on a
9 hard sell on this item here. I think the
10 hearing itself has shown us the nature of
11 planning, the updating of data, the
12 changing in the forecast, the changing in
13 the weights and circumstances that are
14 involved in balancing all of the criteria
15 that we work with.

16 We need to continuously balance
17 objectives that are at times conflicting
18 and we need to make decisions sometimes
19 soon or right away and some other
20 decisions we need to make later.

21 As Mr. Snelson indicated, prudent
22 planning is to defer decision to the
23 just-in-time kind of approach when you
24 make them only as necessary.

25 For that reason you will find us using

1 the word illustrative to describe things
2 like the management of surplus and things
3 like the response portfolio and even the
4 major supply capacity post 2005 or 2010
5 will show illustrative examples of that.

6 The reason we call them illustrative
7 is that we recognize that other options
8 could become available and perhaps there
9 would be better choices available to us.
10 So it really is applying the just-in-time
11 decisions that we use the illustrative to
12 describe some of the aspects of our
13 planning.

14 [12:25 p.m.]

15 Now, my question is then, rather than
16 taking the approach of managing the surplus, if it
17 arises, when the probability is so high that in fact
18 there will be a surplus, is it not in keeping with
19 Hydro's philosophy to defer a decision on a supply
20 option such as the hydraulic option until such time as
21 it becomes necessary to make that decision. I am not
22 sure who would best answer that question.

23 MR. SNELSON: A. Well, the straight
24 answer is no. But it does depending upon what sort of
25 decision you are making. The decisions that are

1 currently being sought in this process are decisions
2 about the need and rationale for the range of
3 hydroelectric capacity that will be used within the
4 next 25 years. And that is an appropriate decision to
5 make at this time. It improves of the flexibility of
6 planning, it allows us to proceed with more specific
7 hydroelectric environmental assessments as necessary,
8 it allows us, presuming that they are satisfactory, to
9 then proceed to make decisions on construction of
10 facilities at the appropriate time.

11 So, we see this as an appropriate step at
12 this stage in the planning process.

13 Q. Well, I think we have had evidence
14 that there is a high probability that some of the
15 priority options may not be necessary for some 10 to 15
16 years, certainly 10 years I think I had confirmation
17 from Mr. Dalziel. Do you agree with that.

18 A. The 10 years was relative to the
19 median load forecast; was that correct?

20 Q. That's right, yes. You are planning
21 towards or around the median load forecast; correct?

22 A. We have described planning around the
23 median as another way of managing uncertainty. That
24 doesn't mean to say that we don't consider the
25 possibility of having to supply a load as high as the

1 upper load forecast. The key element in the
2 difference, and we have talked about it before in our
3 cross-examination, the key element in the difference
4 between what we were doing before and what we are doing
5 now is that we no longer see it as necessary to seek
6 approval for a long lead time major supply options at
7 this time to employ adequate flexibility. We believe
8 that we have in the priority options contracted options
9 such as non-utility generation, Manitoba Purchase, the
10 existing system and flexibility to add certain other
11 elements, we believe that we have sufficient
12 flexibility without seeking major supply approvals at
13 this time.

14 Well, I suppose my concern is that it
15 would appear that there is a real possibility and a
16 strong probability that, for instance, you might not
17 need the hydraulic attainable potential that you are
18 seeking in this hearing for some years to come.

19 A. We have shown in the illustrative
20 surplus management case that some of that capacity, in
21 fact I believe most of it, would be delayed under those
22 circumstances. It's an illustration.

23 Q. I realize that.

24 A. The decision in fact may go the other
25 way. But that is the illustration that we have shown.

1 Q. You have also given evidence that it
2 makes good planning sense not to make a decision when
3 it doesn't need to be made, and you have deferred those
4 kinds of decisions with respect to nuclear and fossil
5 plants; correct?

6 A. Yes.

7 Q. With the understanding, I presume,
8 that these options aren't necessary at this time, you
9 don't need to take that step at this time so therefore
10 put it off until it is necessary.

11 A. Given our strategy where we have a
12 number of options that we prefer to the major fossil
13 and nuclear options, then we don't see a need for
14 nuclear and fossil approvals at this time.

15 Q. I guess what I am looking for here is
16 confirmation of a basic strategy or planning strategy
17 that Hydro has. What is the word you use, the
18 just-in-time kind of approach. I suppose I am asking
19 to you consider whether in fact that might not be
20 logical to apply that strategy to the hydraulic option
21 in light of the high probability that you may not need
22 it in the years to come, and, in fact, when you
23 consider the fact that there may be new technologies on
24 the horizon within that time period, that attitudes may
25 change. Does it not make sense to apply your own

1 strategy of waiting until you have to make that
2 decision?

3 A. Well, the strategy of waiting until
4 you have to make a decision is one that you can wait so
5 long but as soon as you start to lose something by
6 waiting, then you at least have to consider whether now
7 is the right time to make a decision. And these
8 decisions are made in steps.

9 The decision at the moment is to seek a
10 approval of rationale and need for a block of
11 hydroelectric capacity over a 25-year period.

12 There will be subsequent decisions and
13 they may vary in terms of how they are made with
14 respect to specific hydroelectric sites and their
15 environmental acceptability, and even when those
16 approvals have been obtained, then there is a decision
17 that has to be made as to the appropriate timing of the
18 construction of those facilities.

19 But, clearly, you can't make that last
20 decision without having, first of all, gone through the
21 previous steps. And so to put ourselves in the
22 position to be able to make that decision at an
23 appropriate time, we believe it's appropriate that we
24 should have this approval of need and rationale at this
25 time.

1 Q. Obviously from my perspective, we
2 would rather have you have to go through those
3 approvals with all these considerations taken into
4 effect, not that you would be in a position to make
5 that decision or so that you are in a position to make
6 that decision 15 years from now.

7 I have tried to make the point that I was
8 going to make, and I suppose there is not much sense in
9 reviewing, except to point out, again as I say, and I
10 presume that you are going to disagree with me on this,
11 but that there is a high probability that we may not
12 need this particular option. We have a strategy that
13 says that you have applied presumably to all your other
14 considerations, and that is that you don't need today
15 things until it is necessary, but our concern is that
16 you don't seem to be applying that particular strategy
17 to this particular option.

18 A. Well, I have indicated, I think that
19 we have indicated that in the illustrative surplus
20 managements case, when we do move ahead with all of the
21 hydroelectric approvals, the 1,400 to 1,800 megawatts
22 of capacity, there is a specific project that was not
23 included for reasons we have discussed in that case,
24 but all other specific projects proceed within the
25 25-year period. And it's a question of not so much

1 whether they are needed, but when they are needed.

2 Q. Well, is it not also clear though
3 that at some point you are going to need major supply
4 as well?

5 A. Yes, but that is some years further
6 down the path and we don't feel we have to make that
7 decision at this time.

8 Q. I will leave it for now, Mr. Snelson.
9 Thank you.

10 I would now ask everyone to grab their
11 Exhibit 452. I heard Mr. Campbell joking this morning
12 that nobody ever asked any questions about Exhibit 452.
13 I have to confess that I won't be here long here
14 either.

15 I would like to take a look at
16 illustrative approach to managing the surplus that's
17 provided at page 22 of Exhibit 452. I might just note,
18 to the put the witnesses at ease, I do understand that
19 this is an illustrative approach. I would note that
20 one of the features of that approach was to defer the
21 installation of 920 megawatts of generation from units
22 at Niagara, and that this feature is set out at the very
23 bottom of page 22. And I would ask you to grab your
24 pile of interrogatories, and the particular
25 interrogatory I am going to be looking at is 10.33.13,

1 which would be the next one in the pile.

2 THE REGISTRAR: That is .54.

3 ---EXHIBIT NO. 683.54: Interrogatory No. 10.33.13.

4 MR. H. WATSON: Q. That's the third last
5 page from the bottom of my interrogatories.

6 In that interrogatory we asked Hydro to
7 explain the rationale for deferring the Niagara
8 development rather than the Mattagami Complex.

9 Effectively, the only answer we received
10 was: There are many approaches which could be taken.
11 And when we asked if certain considerations had been
12 taken into account in the decision to defer Niagara in
13 the illustrative approach, we were told:

14 The illustrative approach to managing
15 the surplus capacity on page 22 of the
16 Plan Update was not investigated at this
17 level of detail.

18 My question is then, was there any reason
19 or thought put into this illustrative decision to defer
20 Niagara rather than Mattagami Complex?

21 MR. SNELSON: A. First of all, the
22 deferral of Niagara was not a deferral of the Niagara
23 project. It was a deferral of part of the Niagara
24 project.

25 The illustrative assumption was that the

1 tunnels, which are a major part of the project, would
2 be built, and those tunnels take water from above the
3 Falls, under the City of Niagara Falls, all the way to
4 Queenston. And that is a part of the project which
5 enables most of the energy benefits of the project to
6 be obtained.

7 So this was a way in which we could
8 obtain a large part of the benefits of the project and
9 at the same time defer some of the facilities at--

10 Q. I understand and I accept that.

11 A. --a time when they are required.

12 Q. I accept that and understand.

13 Notwithstanding, as you have just noted,
14 you deferred at least portions of that project, and I
15 noted that the Mattagami project or complex wasn't
16 deferred. That was all I was simply asking.

17 Now, my question is: Was there any
18 reason or thought put into the decision, this
19 illustrative decision, to defer part of the Niagara
20 project rather than the Mattagami?

21 A. I believe there was thought put into
22 it, I don't believe there was a lot of analysis.

23 I would expect that a significant aspect
24 of that would be the favourable economics of the
25 Mattagami project, and that the largest part of the

1 energy benefit of the project can only be obtained by
2 the redevelopment of the Smoky Falls section of the
3 project.

4 So, the largest part of the project is
5 the redevelopment of Smoky, and that would be necessary
6 to get the energy benefits as well as the capacity
7 benefits.

8 Q. So there was some analysis done is
9 what you are saying?

10 A. No. I don't think I would call that
11 analysis. I would call that a review of the
12 characteristics of the option and its costs are based
13 on the information that was available, and that the
14 illustrative surplus management was put together,
15 taking into account that knowledge.

16 Q. Actually, on the question of costs, I
17 think that's sort of an interesting point to go to at
18 this point perhaps, and that is the information, I
19 guess, is available at Exhibit 646, page B-7.

20 All I am looking for here is under the
21 heading Hydroelectric you will note that there is a
22 cost/benefit ratio which seems to indicate that the
23 Niagara project is a more economic development than the
24 Mattagami Complex. I think the ratio is .82 for
25 Mattagami and .61 for Niagara; is that correct; Mr.

1 Snelson?

2 A. Those are the numbers that are there.
3 Those numbers do not separate out the cost/benefit
4 ratios associated with parts of the project. So the
5 tunnels and this .61 for Niagara is an evaluation of
6 the project as it exists at the moment, the facilities
7 as they exist at the moment, versus the complete
8 development with the tunnels and the new generating
9 capacity.

10 Q. I raised it because the overall
11 costing of the project was something you raised.

12 In the event that it does become
13 necessary for Hydro to manage the surplus at some point
14 in the future, what criteria or planning considerations
15 will be used by Hydro to determine what options to
16 defer or cancel? Has that been determined?

17 A. Not in a specific way.

18 Q. Would it not be good planning to at
19 least have established that at this point?

20 A. Well, we have indicated in a general
21 way in our direct evidence that in a sense our
22 priorities for avoiding surplus are essentially the
23 reverse of our priorities for adding new capacity. And
24 so, something like demand management, which is high
25 priority for new capacity, new needs, is a very low

1 priority or very low on the list of things that would
2 be selected in terms of reducing the need for capacity.

3 Q. I presume that hydraulic development
4 would in fact be the option that you would most likely
5 defer?

6 A. No, I think major supply is the
7 option --

8 Q. I'm sorry, of the priority strategic
9 options?

10 A. We have shown some deferral of
11 hydraulic in our illustrative cases.

12 Q. That's why I drew that conclusion.

13 A. But the decisions will be made on a
14 project-by-project basis as necessary through time.

15 A. I would like to take just a moment
16 and look at two or three factors that I would like some
17 assurance, I suppose, that these factors would be
18 considered when you make that kind of decision as to,
19 for instance, which hydraulic projects to defer or even
20 cancel.

21 We have already talked about the costing,
22 avoided cost. Would I be correct in assuming that that
23 would be a factor that you would consider in that
24 decision?

25 A. Yes.

1 Q. Would you be looking at loss of
2 energy over long transmission lines from Northern
3 Ontario? Would that be a factor that would be
4 considered?

5 A. Yes, it would be part of the cost
6 evaluation if it could be identified.

7 Q. Would the fact that Niagara is sited
8 in an area where there is obviously larger use of
9 electricity, would that be a factor in preferring that
10 option say over a more remote option?

11 A. It could be, but I don't think you
12 should assume that generation in Northern Ontario is
13 necessarily for transmission to Southern Ontario. We
14 have indicated that over the last 20 years or so the
15 flow of energy has been more into Northern Ontario than
16 out of Northern Ontario. So there is an interchange of
17 energy and there a balance to be maintained.

18 Q. But it would be a factor that you
19 would consider if that were the case?

20 A. Proximity to loads is one of the
21 factors that would be considered.

22 Q. I presume that you would consider the
23 effects of a project on lifestyle and community
24 impacts, those kinds of social environment impacts
25 would be considered as well when you made that type of

1 a decision as to what to defer?

2 A. Those sorts of impacts will be
3 decided and considered in the project-specific
4 environmental assessments.

5 Q. Okay. I am going to move along then.

6 If I could refer you to, I think it is
7 the last interrogatory that I am going to be using,
8 which is Interrogatory 10.33.17.

9 THE REGISTRAR: .55.

10 ---EXHIBIT NO. 683.55: Interrogatory No. 10.33.17.

11 MR. H. WATSON: Q. In that interrogatory
12 we asked whether the CANDU 6 single unit design had
13 been considered as an alternative method of generating
14 electricity now planned in the Update to be provided by
15 hydraulic development.

16 The answer as you as will see is:

17 No. Ontario Hydro has not considered
18 a case in which CANDU 6 generation
19 displaces new hydroelectric generation.

20 This was justified by the statement that:

21 This is consistent with the priority
22 strategic directions listed in Exhibit 74
23 which forms the basis of the
24 demand/supply planning strategy.

25 That's not a particularly satisfying

1 answer.

2 Page 16 of Exhibit 452, at paragraph 2 of
3 that page. Page 16, Exhibit 452, paragraph 2, Hydro
4 stated:

5 Other nuclear options have shorter
6 lead times, reduced investment risk and
7 increased planning flexibility, would
8 better respond to changing circumstances.
9 A preliminary review indicates that
10 single units station nuclear options have
11 the potential to offer these advantages.
12 Such units also offer the potential for a
13 standard off-the-shelf design which could
14 facilitate future approvals.

15 [12:45 p.m.]

16 Mr. Snelson, if the single unit station
17 nuclear option, such as the CANDU 6, has the potential
18 to offer these advantages, then shouldn't Hydro have at
19 least considered a case in which CANDU 6 generation
20 does displace new hydroelectric?

21 MR. SNELSON: A. The advantages that are
22 discussed here are relative to a 4 by 881 megawatt
23 Darlington-type CANDU station and that was not intended
24 to be a discussion of the advantages of CANDU 6
25 relative to, for instance, hydroelectric capacity.

1 Q. Well, it this may not have been --

2 A. That particular statement doesn't say
3 anything about the relativity with respect to
4 hydroelectric capacity.

5 Q. It may not have been that that was
6 your intention to compare it to hydroelectric, but
7 would you not agree that if this particular option has
8 these types of advantages that perhaps it should have
9 been considered with respect to replacing
10 hydroelectric?

11 A. Well, if we were to do this
12 comparison with respect to hydroelectric capacity I
13 believe that the nuclear option would have longer lead
14 time, on a per kilowatt basis it may or may not have a
15 reduced capital cost.

16 Q. I am not really looking to you to try
17 to --

18 A. It has reduced planning flexibility
19 compared to the hydroelectric.

20 But coming back to your specific
21 question, should we have done a case, well, we have
22 considered many options as alternatives and they have
23 been considered as options and the CANDU 6 has been
24 considered as an option along with all the other
25 options that we have looked at and we did not think it

1 was sufficiently promising to carry it forward
2 specifically as a case where you build CANDU 6 instead
3 of hydroelectric developments.

4 Q. You didn't feel that there was an
5 obligation under the Environmental Assessment Act to
6 properly consider it as an alternative method of
7 carrying out your undertaking?

8 A. I think our obligations under the
9 Environmental Assessment Act is more a legal question.

10 Q. Thank you, Mr. Snelson.

11 Perhaps I can address -- this might be an
12 appropriate time to break, Mr. Chairman.

13 THE CHAIRMAN: Yes, we will return at
14 2:30.

15 THE REGISTRAR: Please come to order.
16 We are adjourned until 2:30.

17 ---Luncheon recess at 1:00 p.m.

18 ---On resuming at 2:35 p.m.

19 THE REGISTRAR: This hearing is again in
20 session. Be seated, please:

21 THE CHAIRMAN: Mr. Watson?

22 MR. H. WATSON: Thank you, Mr. Chairman.

23 Q. Dr. Tennyson, in the area of social
24 environment criteria Ontario Hydro has identified four
25 broad criteria to be applied in the evaluation of the

1 Update Plan. Those criteria being social acceptance,
2 employment and regional economic development, local
3 community impacts including special sensitive groups
4 and lifestyle impacts and finally distribution of risks
5 and benefits.

6 Have I identified those accurately?

7 DR. TENNYSON: A. Yes.

8 Q. We know from Exhibit 74 and some
9 discussions we had earlier this morning that social
10 acceptance is a criteria that must be met, albeit with
11 Mr. Snelson's qualification; correct?

12 A. Yes.

13 Q. Would you describe the other three
14 social environment criteria as being criteria that must
15 be met by Ontario Hydro before proceeding with an
16 option?

17 A. As I indicated in my direct evidence,
18 those would be, if you look at the secondary criteria,
19 the other social considerations.

20 Q. So they would fit into that category?

21 A. Yes.

22 Q. I presume Hydro would attach great
23 importance to those criteria?

24 A. Definitely.

25 Q. Thank you. We have already addressed

1 the criteria of social acceptance to some degree and,
2 therefore, I won't pursue that issue further now.

3 However, I would like very briefly look
4 at the other three. Firstly at the criteria of
5 distribution of risk and benefits.

6 Now, I refer you to page -- I should say
7 Volume 148 of the transcript, page 26213, line 11. Mr.
8 Campbell had asked Dr. Tennyson about the criterion of
9 distribution of risk and benefits and in response Dr.
10 Tennyson had stated:

11 "With respect to the distribution of
12 risks and benefits, for most options the
13 local impacts of facilities may be
14 considered inequitable if there are no
15 offsetting benefits."

16 My quick question is, Dr. Tennyson, am I
17 correct in interpreting your comment on this criterion
18 as meaning that those impacted by Hydro's development
19 should receive offsetting benefits?

20 A. I could agree with that, yes.

21 Q. Okay. Am I correct that these
22 benefits would include employment and regional economic
23 development?

24 A. As I have indicated I think on
25 numerous occasions that is normally viewed by the

1 public as some of the benefits that can accrue from a
2 project.

3 Q. Not necessarily, though?

4 A. Oh. Well, there will obviously be,
5 on projects anyway, employment and, as I have
6 indicated, in different locations there would be lesser
7 or greater amounts of corresponding regional economic
8 development.

9 If your question is: Are we attempting
10 to ensure that there will be local and regional
11 economic benefits, yes, we are.

12 Q. In order to offset those who are
13 adversely affected?

14 A. Well, I can't say it's just to
15 offset. I think that what we try to do in our impact
16 assessment work is minimize any negative impacts and
17 maximize any positive impacts.

18 So it is not necessary that you say:
19 Okay, you will minimize a negative impact only by
20 providing some kind of an offsetting benefit. Clearly,
21 you can minimize negative impacts through design,
22 through all sorts of impact management measures that
23 have nothing to do with the other saying it is just the
24 complete picture.

25 My comment in my direct evidence is that

1 it would appear to me that those that do live in the
2 locale of projects would likely want to participate in
3 any benefits of those projects.

4 Q. So for communities that are adversely
5 impacted, you would anticipate that Hydro would make
6 its best efforts to ensure that they had some benefits
7 of development?

8 A. Yes, but what I would like to point
9 out is when you are talking about -- by definition and
10 your question you are saying that they are adversely
11 impacted.

12 I think through our studies we try to
13 understand the full range of impacts and, as I said, to
14 minimize negative ones.

15 So I might argue that through all our
16 impact management measures we are able to minimize any
17 adverse impacts or mitigate --

18 Q. I certainly wouldn't take exception
19 to that point. I guess whether I am trying to confirm
20 is that if we can assume or if we can assume for a
21 moment that there are some adverse impacts, what you
22 are telling me I think is that Hydro is working to
23 provide some sort of offsetting benefits for those
24 negative impacts?

25 A. I don't know. Maybe we are not on

1 the same wave length.

2 Q. Maybe we are talking in circles.

3 A. But all I am saying is that the
4 notion of providing benefits is not directly linked to
5 somehow: Okay, if you are going to get a certain type
6 of negative impact here is something positive we can do
7 for you. Impact management is a full range of
8 activities in order to minimize impacts.

9 So that we try to reduce, eliminate or
10 mitigate any adverse impacts.

11 Q. I realize that the idea obviously is
12 you don't want there to be any adverse impacts at all,
13 of course?

14 A. That's correct.

15 Q. And I accept that Hydro will work
16 towards that goal. The reality is there may be some
17 adverse impacts. Would you acknowledge that?

18 A. There certainly could be some
19 residual impacts and that's another thing that impact
20 management measures are designed to try and address.

21 Q. Now, this is where I would have
22 assumed that your fourth criteria would have come in.

23 When you come up with this criteria,
24 distribution of risk and benefits, my assumption is
25 that where there is a risk Hydro will work towards

1 providing a benefit. Is that a correct interpretation
2 of that or not?

3 A. To me the notion of risks and
4 benefits is that there can be a public perception that
5 there are risks associated with a particular facility.

6 So, say, for example, in an area where
7 there were concerns about property values, the
8 perception that there might be some effect on property
9 values, what we have done in the past is implemented a
10 property value protection program to try and not only
11 minimize that perception of risk, but also to address
12 it if in fact an impact does result.

13 Q. Okay. I think you have answered my
14 question, then. I would certainly like more of a yes
15 or no type of answer.

16 A. sorry

17 Q. And maybe I will put it to you one
18 more time and see if I can recap what you have said to
19 me I think.

20 We won't get into the debate as to
21 whether there are in fact risks associated with a
22 particular development, but Hydro's goal or criteria is
23 that it will be acting to provide benefits to those who
24 are at risk or who in fact may be impacted at point?

25 A. Yes.

1 Q. Okay. I suppose this brings me to
2 the last of those criteria that I am going to deal with
3 here, local community impacts. The full criteria being
4 local community impacts including special or sensitive
5 groups and lifestyle impacts.

6 Is it the community of Moosonee who we
7 act for considered to be a special or sensitive group?

8 A. I think you are aware that these
9 criteria were developed over time and were also
10 involved in the environmental assessment analysis and
11 that time special/sensitive groups did refer to
12 Aboriginal groups.

13 It could also apply to, as I said
14 earlier, perhaps there would be seniors that might be
15 affected differently than others in relation to a
16 particular project or it could be any lifestyle group
17 that was identified.

18 Q. So in answer to my question, was
19 Moosonee identified as a --

20 A. We didn't do it on a site specific --
21 it isn't a certain site-specific basis.

22 Any kind of determination of lifestyles
23 that are affected, that's all done at the project
24 specific stage in terms of understanding the local and
25 regional area.

1 Q. So at this stage you haven't
2 identified any particular communities that are special
3 or sensitive?

4 A. No.

5 Q. Okay. You started to get into this a
6 bit. I don't know if I really got a full answer,
7 though.

8 On what basis do you intend to identify a
9 particular community to have that status?

10 A. Well, as I have indicated, when we do
11 project specific work we will study all local
12 communities within a regional area and at that point in
13 time through our studies we would identify whether or
14 not there were impacts on lifestyle, whether it be
15 traditional or current.

16 As I indicated in my evidence on Panel
17 7 -- or in cross-examination, on a particular project
18 one of the groups that we identified and worked with
19 were the flying farmers because they had a particular
20 lifestyle that could be --

21 Q. The which?

22 A. Flying farmers.

23 Q. I won't pursue that at all.

24 A. Okay.

25 Q. I'm not sure I really have a sense if

1 you have a set of criteria yet that you will be working
2 from to identify who those groups are.

3 Is the criteria just those who are
4 impacted; it is that what you are saying?

5 A. No, as part of our work we have to
6 understand the local area, the communities, the region,
7 as if we lived there in order to understand the full
8 range of potential impacts.

9 So part of the work is, first of all,
10 identifying the social and cultural and economic
11 environment that's out there.

12 On top of that we then work with the
13 people to identify potential impacts and potential
14 impact management measures and on our studies at the
15 present time, some that I am involved in, we are doing
16 joint planning studies with Aboriginal communities to
17 identify any potential impacts on the traditional way
18 of life and, in fact, current activities, harvesting
19 activities and that as well. So it is that kind of
20 work we go through.

21 So if you look at my evidence on Panel 7,
22 we have a full set of factors we call them. They are
23 like potential impact areas, areas of concern that we
24 look at. So it is population, economy, lifestyle,
25 culture. It's quite an exhaustive list.

1 Q. So how would you get down to
2 determining which groups needed some sort -- maybe I
3 should be going back to this.

4 I presume that by identifying groups as
5 being sensitive or special that it is Hydro's intention
6 to do something different or act in some different way
7 towards that particular group; is that right?

8 A. One of the things, as I have said, is
9 to try and understand if there are different lifestyles
10 or understand the lifestyle in an area. In fact, there
11 will be different ones.

12 So we work with all the people in the
13 study area, as I said again, to understand what that is
14 and then what the potential impacts could be and, as I
15 say, design appropriate impact management measures.

16 Q. So I guess in answer to the question
17 there is not particular criteria, firm set criteria
18 that Hydro would apply to determine which groups had or
19 needed this different status?

20 A. Well, we do that through the studies
21 and through the consultation.

22 Q. So that's what I am saying. You
23 don't have a set of criteria, for instance, that I
24 could look at today and know that certain types of
25 communities would fit within that?

1 It doesn't work that way is what you are
2 telling me, I think?

3 A. I believe that each community is
4 unique. I believe they have to be studied to determine
5 that uniqueness and what their range of interests and
6 concerns are.

7 I think the best I can do, as I say, is
8 we have a list of factors and under that they are used
9 (A) to describe the environment so that you can see
10 whether or not we do actually understand that
11 environment out there and they are also used to
12 organize our discussion of impacts.

13 Now, we think in developing them, and it
14 is part of the science of what I do, that those areas
15 of concern, as I will call them as opposed to factors,
16 do allow us, and you, to get that complete picture.

17 Q. I think the answer to my question is
18 no, you don't have a general set of criteria, or yes
19 you do have them?

20 A. You are calling them criteria. I am
21 saying we have a list of factors that we produce that
22 says this is how we do it.

23 Q. Okay. So you have a list of factors
24 that you would use to determine which communities might
25 warrant that extra status?

1 A. And to understand those communities.

2 I don't know that it is --

3 Q. To understand those communities.

4 That's a different thing than determining which
5 communities are, but I guess it is just a matter of
6 approach.

7 A. Okay.

8 Q. All right. I think I understand what
9 you are doing, then. That's sufficient, thank you.

10 Would it then be that Hydro would
11 undertake an indepth study of nature that you are
12 talking about with respect to a community like Moosonee
13 that would be in an area where development was planned?

14 A. Yes.

15 Q. And am I right in understanding that
16 that kind of study hasn't yet occurred with respect to
17 Moosonee?

18 A. It depends what we are talking about.
19 At the plan level we did not do community specific
20 studies. That was not the level of analysis that we
21 did.

22 Q. Okay. I am just trying to find out
23 what has been done.

24 A. Well, what happens is when we have a
25 particular project, or I am sure you are familiar with

1 many of our documents, but we have a particular project
2 in an area, one of the first things we do is define the
3 study area.

4 From my perspective, in the
5 socio-economic impact assessment, it is usually a broad
6 regional area and normally defined by the extent to
7 which people could, say, commute to work or how far the
8 economic benefits might flow from the project, but as
9 well it can be determined that there could be broad
10 areas of impact beyond just the local community.

11 I mean, clearly in working with
12 Aboriginal communities much of their traditional "home
13 land" area or whatever word we want to use for that is
14 often very far from the communities right now. So that
15 you are defining a very broad impact area that then we
16 study.

17 Q. Just so I understand this. For
18 example, if we looked at the site specific Mattagami EA
19 which has already been filed - I am going to get into
20 any depth here at all - but if we are talking about
21 that as an example, I presume then that indepth study
22 of a community like Moosonee would have been done prior
23 to that type of document being submitted?

24 A. I can't speak to that particular
25 document or project. If in fact it were seen to be

1 part of the impact area, then it would have been
2 studied.

3 Q. Okay. Would you agree that without
4 that type of study having been done that it would be
5 impossible for Hydro to determine how and whether its
6 plans may impact upon a community?

7 A. What are we talking about again?

8 Q. The same sort of thing --

9 A. Plans. If you are talking plans, are
10 you talking the Demand/Supply Plan.

11 Q. I am assuming that planning is done
12 at the demand/supply level as to how these kinds of
13 process will be carried out.

14 You have told me already that you know,
15 for instance, that an indepth study would be done of a
16 local community to determine whether it was going to be
17 impacted.

18 What I am asking is, would you agree that
19 kind of study needs to be done in order for Hydro to be
20 able to determine whether their site specific project
21 will impact that community; in other words, you have to
22 that base information there?

23 Would you agree with that?

24 MRS. FORMUSA: He just asked that
25 question and she gave him the answer. That was the

1 previous question, Mr. Chairman.

2 MR. H. WATSON: If the question has been
3 asked already I apologize. Maybe I missed on the
4 answer or misunderstood.

5 Q. I assume your answer then is -- I am
6 trying to determine whether you would agree that in
7 order to properly assess it you would have to have that
8 kind of study having been done?

9 DR. TENNYSON: A. As I said before, I
10 have trouble with your assessing it. What I said in my
11 previous answer was at a plan level we did not do
12 community specific studies.

13 [2:55 p.m.]

14 Those are considered appropriate at the
15 project level. And in terms of any project, it would
16 be written in the documentation, just as I have said to
17 you. A study area would be determined and studies that
18 were considered appropriate at that level would be
19 done.

20 Q. All my question simply was at this
21 point was to determine whether in fact you would agree
22 that those kind of studies had to be done in order for
23 Hydro to be able to --

24 THE CHAIRMAN: I really do think now that
25 is the third time, so perhaps you can go on to

1 something else.

2 MR. H. WATSON: All right, Mr. Chairman.

3 Thank you.

4 Q. Volume 148 of the transcript at page
5 26212, I am looking at the last paragraph on that page,
6 some evidence given by Dr. Tennyson, I believe, where
7 she states:

8 "Local community impacts will vary
9 according to project characteristics; for
10 example, a redevelopment or the
11 development of a new site and the
12 location, size, servicing capacity,
13 infrastructure and character of local
14 communities.

15 There may be significant potential
16 impacts on local communities from the
17 in-migration of workers and their
18 families particularly for large
19 generation facilities associated with
20 hydroelectric, fossil and nuclear
21 options; therefore, a variety of impact
22 management measures will be required to
23 minimize and offset potentially negative
24 impacts and enhance positive ones."

25 Dr. Tennyson, does that accurately

1 outline what Hydro has contemplated under the criterion
2 local community impacts?

3 DR. TENNYSON: A. I don't think I
4 understand your question.

5 Q. Well, is this a description
6 essentially of the kinds of considerations that are
7 involved in local community impacts, that criterion?

8 This was the evidence you gave I believe
9 in response to Mr. Campbell's question and with respect
10 to local community impacts.

11 A. Yes, I am well aware of giving
12 evidence on this. It is just that I don't quite
13 understand your question but I will try to deal with
14 it.

15 Local community impacts as I have said
16 are part of what we do as part of our socio-economic
17 impact assessment. For any project we will try to
18 identify the those impacts, and I have told you we have
19 a full range of factors under which they would be
20 grouped.

21 What I was trying to indicate is that
22 they do vary. That's the notion that different
23 communities have different characteristics, as do
24 different projects have different characteristics. And
25 it's that understanding of how a particular project

1 with its particular characteristics will fit or affect
2 a particular community. And so, for example, on the
3 community side, you do look at things like its
4 location, its size, its existing servicing capacity,
5 the infrastructure that's there and it is character.
6 And that's some of the things that are brought into the
7 assessment.

8 The criterion that was also described,
9 which is what we were getting out, it's in the
10 environmental analysis, we have been identifying this.
11 And once again, it says:

12 Local community impacts that will
13 focus on how the size and service
14 capacity of communities is affected by
15 the project activities and potential
16 population inflow. Many communities
17 would require expansion of community or
18 municipal facilities and services such as
19 roads and water and waste treatment
20 facilities.

21 So, for example, as I have indicated here
22 many times as well, that one of the biggest predictors
23 of potential impacts is any in-migration of workers and
24 their families, because I think you can appreciate that
25 depending on the services available in the community,

1 their degree of utilization, the infrastructure that's
2 available, all of that would potentially be affected
3 and we have to try and predict how the one aspect of
4 the project, okay, it's going to require so many
5 workers, how will that affect the communities. In
6 addition, how many workers, potential workers might be
7 available in the regional area, in the local area, to
8 also work on the project.

9 So that it's an analysis of that fit,
10 which is what we are talking about.

11 Q. I suppose what I was trying to do was
12 to determine if there were other types of impacts that
13 were considered under that heading. That's why I was
14 asking you about it.

15 A. Which other types? Give me some
16 examples.

17 Q. Maybe I should just push on and
18 explain what I am driving at and see if this makes
19 sense to you.

20 It has struck me as I reviewed your
21 evidence and the panels's evidence on these four
22 criteria, and in particular because it seemed the most
23 relevant to my concern, the local community impact
24 criterion, that there seems to be something missing
25 from the list.

1 The local community impacts criterion
2 seems to be focussed on problems of servicing capacity,
3 infrastructure, in-migration of workers and that sort
4 of thing, and I think that's what you have conformed
5 for me.

6 However, in your evidence there would
7 appear to be little or no focus on the, at least in
8 this list of criteria, the negative social impacts in
9 the community and its people that may result from
10 negative physical environmental impacts from Hydro's
11 development.

12 Now, before I have your answer to that --

13 THE CHAIRMAN: Perhaps you would let her
14 answer that question because that seems to be a
15 question.

16 MR. H. WATSON: It is a question. I
17 wonder if I could provide an example, though, before
18 getting an answer for it, Mr. Chairman.

19 THE CHAIRMAN: All right.

20 MR. H. WATSON: I thought it might be
21 more helpful because of my long-winded explanation.

22 Q. Would you agree, for instance,
23 hypothetically speaking of course, if hydraulic
24 development or redevelopment resulted in changes in the
25 flow of river system, that this physical environmental

1 impact might have a negative impact on a local
2 community? For instance, it might result in the
3 inability of residents to navigate a river, this is all
4 hypothetical, that might result in effects on tourism,
5 commerce, access to facilities like schools or
6 hospitals; in other words, a physical environmental
7 effect which has a social environmental effect
8 resulting on that local community.

9 So I guess, first of all, I assume you
10 would agree that environmental impacts can have effects
11 in terms of social on the social side, would you agree
12 with that, first of all?

13 DR. TENNYSON: A. I think I am already
14 on the record as saying that one aspect of doing social
15 impact assessment is acknowledging that impacts do
16 travel through the natural environment and then can
17 affect people and it is when it steps into the area of
18 how it affects people that I would be analyzing that.

19 And I don't know if that was a previous
20 question, but in terms of the kinds of things you said
21 would we look at under this of --

22 Q. Well, I guess --

23 THE CHAIRMAN: Please let her finish.

24 MR. H. WATSON: Sorry, Mr. Chairman.

25 DR. TENNYSON: Can I finish? Thank you.

1 That's precisely the analysis we do. So,
2 for example, if hypothetically, and I have worked on
3 some hydraulic projects, naturally if there is going to
4 be any changes in water levels and flows, our
5 scientists are looking at any effect on the water body,
6 on fish spawning, on whatever, and correspondingly
7 people in the area can have concerns then and do, how
8 is this going to navigation, boating, fishing, and
9 those are precisely the kinds of potential impacts
10 that, (A), we identify, and (B) do address. We say
11 either, yes there will be, no there won't. And if
12 there are tending to be any effects, that's when we
13 look at mitigation and all our other impact management
14 measures. So you're right, we do look at all that.

15 MR. H. WATSON: Q. I suppose now to
16 return to my original question, with respect to your
17 evidence on the four social environment criteria, would
18 you agree that Hydro has not focussed on the social
19 environmental impacts that result from those physical
20 environmental impacts that may be caused by Hydro's
21 development?

22 THE CHAIRMAN: I thought that was what
23 she just answered. I thought she covered all that just
24 this minute.

25 MR. H. WATSON: Well, no, with respect.

1 THE CHAIRMAN: What is the question you
2 are asking? I don't understand your question. I am
3 having the same problem the panel has.

4 MR. H. WATSON: I'm sorry. Perhaps I am
5 not explaining it very well.

6 Q. The question that I thought was just
7 answered was Dr. Tennyson was confirming that in fact
8 Hydro agreed that there were social impacts that could
9 result from environmental effects. I thought she had
10 confirmed that and said that in fact Hydro had looked
11 at that to some degree.

12 I suppose what I was trying to get back
13 to was, when I read through the criteria and the
14 evidence that was given with respect to those four
15 criteria, I wondered if that had made its way, that
16 understanding that Dr. Tennyson has just provided, had
17 made its way to the planning stage of making it into
18 the criteria, so to speak.

19 Now, I stand to be corrected on this, but
20 I felt when I read through that evidence that that
21 didn't seem to be represented.

22 DR. TENNYSON: A. In my direct evidence,
23 in those areas I was just attempting to talk about how
24 local community impacts can vary based on these various
25 things.

1 When I say character of local
2 communities, to me that includes, it can be any sort of
3 unique physical, social or anything else.

4 So, I mean, the point I am making is that
5 we do all the things you are saying. We are cognizant
6 of it. It would be part, this is just not an
7 exhaustive list.

8 When I did these four I had included the
9 local community impacts including lifestyle and that,
10 and clearly that's one of the things.

11 Q. So that would fit under that
12 criteria?

13 A. Exactly.

14 Q. That's really my question. It didn't
15 seem to be evident at the face. Thank you, Dr.
16 Tennyson?

17 A. Can I just add something?

18 Q. Certainly.

19 A. If you look at, it's Exhibit 646, and
20 page B-12, it's the option, we call it the options
21 comparison, and if you look at the bottom where it says
22 Hydroelectric.

23 Q. Yes, I have got it.

24 A. And once again as I say, what I lead
25 in my direct was a summary of some main points out of

1 this, but if you look at what I have said under the
2 local community impacts including special sensitive
3 groups and lifestyle impacts, you will see that I did
4 indeed mention the fact that they can vary according to
5 project characteristics and character communities.
6 Then I talked about the impacts from in-migration.

7 The third point is that there are
8 potentially significant impacts from flooding, river
9 flow changes and increased access on Aboriginal people,
10 their communities and traditional areas, and their
11 lifestyles which can be identified and addressed
12 through co-planning, that is joint studies including
13 impact management measures.

14 Q. That's helpful. Thank you, Dr.
15 Tennyson.

16 Staying with that exhibit, perhaps we
17 could look at page 3, paragraph 10. The second
18 sentence of that paragraph reads:

19 Hydro is committed to integrating
20 environmental considerations into its
21 planning and operating practices.

22 Does Hydro have a process in place to
23 integrate the environmental considerations raised by
24 stakeholders into Hydro's planning and operating
25 practices? Is there a process in place?

1 MS. HOWES: A. I would say some
2 information is gathered certainly during a consultation
3 program.

4 Certainly this hearing is a way of
5 integrating environmental implications into our plans.

6 Certainly on a project-specific basis we
7 would approach projects in much the same way as Dr.
8 Tennyson has indicated, there would be an
9 identification of the study area in consultation with
10 stakeholders. Obviously we would need input from
11 stakeholders as to resource uses, for example.

12 Q. So this would be an ongoing thing
13 through operation as well?

14 A. Yes.

15 Q. Okay. Thank you.

16 I would like to refer the Board, Ms.
17 Howes, to Volume 148, page 26195. At that page, Ms.
18 Howes, you set out the environmental effects of
19 hydraulic options, both positive and negative. At line
20 4 you stated:

21 "There are a number of advantages to a
22 hydraulic option over conventional coal.
23 It is a renewable resource. It is
24 indigenous to Ontario. There would be no
25 acid gases produced and few wastes

1 produced. The major waste would during
2 the construction period."

3 On the other side you went on:

4 "There are, however, some
5 disadvantages. One would be the
6 production of greenhouse gases such as
7 methane and carbon dioxide which would
8 result from flooding for a reservoir.
9 There is also some concern of mercury
10 release which is likely in --"

11 I believe that would probably be
12 ineffective. I could be wrong.

13 A. Let's say due to reservoir formation.

14 Q. Okay.

15 "...and the concern is uptake of
16 methyl mercury by fish. Reservoir
17 flooding could also preclude other land
18 uses; on the other hand you could argue
19 that there would be other land uses
20 created as a result of reservoir
21 formation."

22 I would refer you to, before I ask my
23 question, Exhibit 464, at page B-2, through B-6, which
24 is a series of charts on the environmental
25 characteristics of the various options, and it

1 identifies the same negative effects.

2 Would you agree with that, Ms. Howes?

3 A. It identifies environmental effects,
4 yes. Essentially these, yes.

5 Q. Specifically are they essentially the
6 same as those concerns that you have raised in your
7 direct evidence?

8 A. I would say generally, yes.

9 Also, if I could refer you to an exhibit.
10 In Exhibit 4 in the appendix, which is page C-14,
11 through C-16, there is a discussion of generic natural
12 and socio-economic effects of hydraulic developments.

13 Q. Okay. If I were to look in these
14 three spots, and this is all I want to do with it this,
15 if I were to look in your direct evidence, these charts
16 that you have provided to us for this particular panel
17 and the reference that you just gave me, would that
18 essentially be all of the environmental impacts of the
19 hydraulic options that Hydro has identified?

20 A. No. I think we have also identified
21 another exhibit. And this is one that just was I think
22 issued in Panel 6 and it was natural environment and
23 health effects of hydroelectric developments, and Mr.
24 Dalziel knows the Exhibit No., and it is 333.

25 Q. I am familiar with that one as well.

1 Thank you.

2 Okay. Dr. Tennyson, I want to take a
3 look, we sort of touched on this particular point this
4 morning, but there were some other questions that I
5 wanted to address with respect to it.

6 If you look in Volume 148 at page 26199,
7 you gave some evidence identifying the lessons Hydro
8 had learned through the planning process. And you
9 stated, I believe, it's line 6:

10

11 "And the fourth point is that Hydro's
12 priority options generally have fewer
13 environmental effects when you compare
14 them to a major supply option like
15 conventional coal."

16 In this context, just before I get to my
17 other questions, the word "environmental", are you
18 using that in the larger sense or to include social as
19 well as natural and physical effects?

20 THE CHAIRMAN: I think this is Ms. Howes.

21 MR. H. WATSON: I am sorry, is this Ms.
22 Howes? My apologies.

23 MS. HOWES: Maybe I would prefer to give
24 it to Dr. Tennyson.

25 I think I was specifically referring to

1 natural environment there.

2 MR. H. WATSON: Q. Specifically natural
3 there.

4 I note that in the statement I referred
5 to you or read to you, that you put the priority
6 options together, lumped them together, but would I be
7 right in assuming that there are fewer negative
8 environmental effects associated with, for instance,
9 demand management as opposed to hydraulic development?

10 MS. HOWES: A. I am having trouble with
11 the word "fewer". I would say they are different.

12 And I think the point that I was trying
13 to make is virtually everything we do has environmental
14 effects.

15 I would suggest that with some demand
16 management programs, for example, if we are replacing
17 equipment, then we are creating a waste management
18 problem for one. We can also have a problem of dealing
19 with hazardous materials that we are extracting.

20 "Fewer" is the word I am stumbling over
21 relative to hydraulic.

22 Q. So what you are saying is you do
23 believe that there will be environmental impact of a
24 similar nature with all of the priority options?

25 A. Not of a similar nature. I would

1 never have said that.

2 I would say there are environmental
3 effects of all of the options. They are different.

4 Q. But they all have environmental
5 impacts?

6 A. Let's call them effects, yes.

7 Q. Okay. Would you agree that
8 notwithstanding the fact that Hydro has concluded that
9 there are fewer environmental effects associated with
10 the hydraulic option, now I am thinking as opposed to
11 the major supply options, for instance, that a
12 particular physical environmental impact even one such
13 impact, might have great impact on a particular
14 community?

15 A. Certainly that's a possibility, and I
16 would suggest that's more appropriately addressed
17 during a project-specific stage when we have actual
18 knowledge of the site, the geographic basis for this.

19 Q. I am not worried about the specific
20 sites here. I am just thinking in principle whether
21 you would agree with that.

22 A. This is another hypothetical?

23 Q. Absolutely.

24 A. It certainly is possible there could
25 be circumstances.

1 Q. Thank you.

2 [2:45 p.m.]

3 I will now refer the Board to Exhibit 74,
4 the demand/supply planning strategy, in particular page
5 15 and I would refer the Board to general strategic
6 principle 1.4 which reads:

7 Ontario Hydro will take a leadership
8 role in protecting the environment.

9 Ms. Howes, would you confirm the
10 importance of the strategic principle in Hydro's
11 planning and operations.

12 A. Yes, I would.

13 Q. Can I refer everyone to Volume 94 of
14 the transcript.

15 THE CHAIRMAN: 94?

16 MR. H. WATSON: 94. It is the first time
17 he have referred to this one. I believe it was
18 provided.

19 I would caution you not to put away your
20 direct evidence volumes, 148 or 149, but we will
21 briefly be looking at a piece of evidence here.

22 MS. HOWES: I am afraid we don't have 94.

23 MRS. FORMUSA: It wasn't on the list.

24 MR. H. WATSON: I'm sorry, I thought it
25 was. It was supposed to be. My apologies, I thought I

1 had included it in your list.

2 MRS. FORMUSA: Just one second.

3 MR. H. WATSON: Q. Looking at page
4 16653, again my apologies for not having that on the
5 list that I provided. I meant to have it there.

6 16653, in answer to a question about
7 whether cumulative impact assessment would be done
8 prior to the redevelopment of the Mattagami Complex,
9 Mr. McCormick stated for Hydro:

10 "I think in an ideal world where you
11 can begin all your planning from day one
12 and there is no history and there are no
13 external influences a plan assessment
14 could well indeed have included the
15 Mattagami extensions, but in fact it
16 isn't an ideal world."

17 Ms. Howes, perhaps you could answer this.
18 Is it still Hydro's intention to proceed with the
19 Mattagami Complex redevelopments prior to the
20 completion of what Hydro has called its plan
21 assessment?

22 MS. HOWES: A. I don't think I have
23 anything further to add than what was described in
24 Panel 6 evidence.

25 Q. Thank you. In the same volume at

1 16664, in the middle of the page, line 9, Mr. McCormick
2 stated that:

3 "Ontario Hydro has not participated in
4 studies, workshops or other
5 investigations dealing with the
6 cumulative effects of proposed
7 hydroelectric developments in Manitoba,
8 Quebec and Ontario."

9 Then he indicated a willingness to
10 cooperate with government studies.

11 Ms. Howes, is this still the status of
12 Hydro's interprovincial assessment?

13 A. If you could give me a second to read
14 the question in the context.

15 Q. Okay. I'm sorry.

16 A. Do you know what document this is
17 being referred to because it appears to be a quote and
18 I am trying to determine where the quote --

19 Q. I believe it was actually from an
20 interrogatory, if I can recall correctly.
21 Interrogatory 6.33.9

22 Yes, interrogatory 6.33.9.

23 When that was put to Mr. McCormick I believe he said
24 the statement in the interrogatory response continues
25 to be true. Perhaps I should have taken the time to

1 read through the whole thing.

2 Do you understand what I am asking?

3 A. I think generally I know what you are
4 asking and I am also aware that in the package of
5 material that you provided us to review there is a
6 workshop addressing exactly this, that Ontario Hydro
7 participated in.

8 So I would have to say no, this
9 information is no longer correct. We have participated
10 in that workshop that you provided us the minutes for.

11 Q. To be honest, I thought I would get
12 through this rather quickly, that question.

13 I did want to, though, maybe clarify for
14 the Board's benefit just what we are talking about, at
15 least what I think what we are talking about.

16 It is my understanding from evidence
17 given that Hydro is sharing information with a private
18 group consisting of the Rawson Academy, the Canadian
19 Arctic Resources Committee and the Environmental
20 Committee of -- I believe the word is pronounced
21 Sanikiluaq. It is spelled S-a-n-i-k-i-l-u-a-q.

22 A. Yes, I mentioned that in my direct
23 evidence and I must admit I did pronounce the community
24 name slightly differently than you did.

25 Q. I would take your pronunciation I am

1 sure. This is a group that is spearheading a study
2 into the cumulative effects of development into the
3 Hudson Bay and James Bay bioregion; is that correct?
4 Is that your understanding?

5 A. Yes.

6 Q. I would like to submit this group
7 proposal as an exhibit if that hasn't already occurred.
8 I don't believe it has.

9 THE CHAIRMAN: Are you going to ask
10 questions about it?

11 MR. H. WATSON: I will be asking one
12 brief question.

13 THE CHAIRMAN: All right.
14 The number?

15 MR. H. WATSON: The title of the document
16 is Sustainable Development in the Hudson Bay/James Bay
17 Bioregion.

18 THE REGISTRAR: Thank you. No. 718.
19 ---EXHIBIT NO. 718: Document entitled: Sustainable
20 Development in the Hudson Bay/James Bay
21 Bioregion.

22 MR. H. WATSON: Q. I would refer the
23 Board --

24 THE CHAIRMAN: Just a moment until we get
25 it.

26 MR. H. WATSON: I'm sorry.

1 Q. I would refer the Board, if it is now
2 available to you, to page 18 of the exhibit and I am
3 particularly interested in the eighth item on the list
4 and perhaps I will read the introduction to the
5 section, it says:

6 The proposed program on cumulative
7 effects in the Hudson Bay James Bay
8 bioregion will follow an ecosystem
9 approach. The following points reflect
10 this approach which will...

11 And in particular I would ask you to look
12 at, I believe it is the eighth, the item that reads be
13 based on natural biogeographic units such as watersheds
14 rather than on political boundaries.

15 Ms. Howes, would you agree with the
16 Rawson's group conclusion which I have just read that
17 their cumulative effects study should be based on this
18 larger geographic area rather than on political
19 boundaries? Would you agree with that?

20 A. I wouldn't state it as an conclusion.
21 I think that is one of the assumptions of their study
22 and certainly we are working with the Rawson Academy.

23 So, yes, we are certainly convinced that
24 we should be working on a watershed basis and I think
25 that's also why we, when looking at the Moose River

1 Basin, for example, suggested a river basin was an
2 appropriate way of studying hydraulic effects. This is
3 a much broader study, agreed.

4 Q. Just to explore for a moment Hydro's
5 involvement with this group that is spearheading this
6 study, are you providing data? That's how I understood
7 your evidence to be --

8 A. Yes, we are supplying data and we
9 also participated in one workshop. I think we are
10 involved in some of the steering committee work.

11 Q. Okay. Ms. Howes, Hydro is also aware
12 of initiatives by the Federal Department of Fisheries
13 and Oceans to assess the cumulative impact of
14 development in the Moose River Basin?

15 A. Yes, and we have been in touch with
16 them and discussed the issue with them and have agreed
17 to share data with them and to participate in their
18 study. My understanding is at this point that project
19 has not been launched.

20 Q. You should be aware, I presume,
21 because I know that there were Hydro people at that
22 particular workshop that occurred a month or two ago.

23 I presume then you had seen the document
24 I already provided to you earlier today?

25 This is a document entitled: Hypothesis

1 of Effects of Development in the Moose River Basin, a
2 Workshop Summary, a Final Report prepared for the
3 Department of Fisheries and Oceans.

4 A. The first time I saw it was this
5 morning.

6 Q. Okay.

7 MR. H. WATSON: I would like to have this
8 entered as well as an exhibit. I will have a question
9 on it a little bit later.

10 THE REGISTRAR: It will be 719.

11 ---EXHIBIT NO. 719: Document entitled: Hypothesis of
12 Effects of Development in the Moose River
13 Basin, a Workshop Summary, a Final Report
prepared for the Department of Fisheries
and Oceans.

14 MR. H. WATSON: Q. Now I come to my
15 final area of questions. I would like to direct the
16 Board and the witness panel to Ms. Howes' evidence with
17 respect to cumulative impact assessment.

18 If you would turn to Volume 148, page
19 26246, line 10 of the transcript.

20 Has everybody been able to find it?

21 In describing the first stage of Hydro's
22 evaluation of cumulative effects, Ms. Howes stated, and
23 I quote:

24 "Yes. In an attempt to identify and
25 evaluate the cumulative and environmental

1 effects, we did two things. First, we
2 identify or estimated the total resource
3 use, the total emissions, the total
4 effluents and wastes over the planning
5 period. We also presented the data on a
6 per terawatthour basis so that we could
7 look at the trends over the planning
8 period."

9 Now, does this accurately reflect Hydro's
10 first stage in the evaluation of the cumulative effects
11 of its proposed development, Ms. Howes?

12 MS. HOWES: A. I would say it is one
13 stage. We discussed this in some detail yesterday with
14 Ms. Kleer.

15 Q. I will have to apologize having not
16 read the transcript thoroughly with respect to that.

17 This does accurately reflect stage one,
18 then?

19 A. I would say it is one stage, yes. It
20 is identifying what the emissions and effluents are,
21 yes.

22 Q. Would I be correct in concluding that
23 the total production of mercury from flooding or
24 erosion, et cetera, as an example would be a part of
25 that calculation?

1 A. Certainly in the site-specific stage,
2 yes, it would be significant.

3 Q. With respect to environmental impacts
4 of a physical nature that would not constitute an
5 emission, effluent or waste or natural resource use, am
6 I correct in assuming from your direct evidence that
7 such impacts were not considered in assessing the
8 cumulative impact of proposed development?

9 A. Certainly not at the plan stage. I
10 think we have been quite explicit that at a
11 site-specific stage we would look at a broader range of
12 environmental effects and in the document that you have
13 identified as Exhibit 718 -- or 719, excuse me, there
14 is a broader range of environmental effects identified
15 and that's consistent with what we would probably do
16 during a site-specific project.

17 Q. So you would agree, I presume, that
18 in assessing a cumulative impact or doing a cumulative
19 impact assessment that you would require additional
20 information not set out in your stage 1?

21 A. Certainly doing an environmental
22 assessment, yes, it would be a broader range.

23 I am having trouble with your term
24 cumulative effects assessment. Within my area of
25 expertise that has quite a different connotation and I

1 think I was quite clear in my direct evidence that
2 there is a fair amount of uncertainty as to what
3 exactly a cumulative effects assessments is, how it
4 should be done, what the geographic basis should be,
5 what the environmental receptors are and one of the
6 efforts that is ongoing currently is to determine
7 techniques, methodologies, et cetera, with respect to
8 cumulative effects.

9 Q. I would like to look at some of the
10 concerns and issues you raised in a moment.

11 I would now like to a look at the second
12 stage of this evaluation of the cumulative effects of
13 Hydro's proposed development which is set out I believe
14 in the next page or the bottom of that same page, line
15 17 of page 26246. Line 17, Ms. Howes stated:

16 "And the second thing we did was that
17 we compared our expected emissions and
18 certain other environmental criteria
19 against anticipated future regulation,
20 where they existed, and this was as a
21 proxy for determining acceptable
22 environmental performance.

23 And what we assumed was that
24 environmental regulations were set in
25 Ontario with a view to limiting emissions

1 and waste to levels that would have
2 acceptable cumulative effects on the
3 environment within the province."

4 Now, before proceeding I would like to
5 ensure that I understand the second phase of your
6 cumulative impact assessment.

7 Would I be correct in stating, Ms. Howes,
8 that the second and final phase of this assessment
9 consisted of considering those emissions and effluents,
10 et cetera, estimated in Stage 1 of your process against
11 what Hydro anticipated to be future environmental
12 regulatory standards?

13 A. As I mentioned to Ms. Kleer
14 yesterday, yes, in fact that's part of our analyses.

15 Q. Okay. Continuing on with your
16 evidence at the top of the next page, Mr. Campbell
17 asked you the following question, he said:

18 "Now would it be fair to conclude from
19 that that a full cumulative impact
20 assessment was done for each of the
21 plans?"

22 Ms. Howes responded:

23 "I would have to say yes and no. I
24 would say yes because we looked at the
25 environmental effects over time and tried

1 to determine their acceptability by
2 comparing emissions, et cetera, against
3 expected future environmental
4 regulations.

5 "But I would have to say no because
6 our work was not comprehensive enough to
7 be called a complete cumulative effects
8 assessment, but I think our work reflects
9 the current state of the art. We are
10 struggling, as are other practitioners of
11 environmental impact assessment, to try
12 to get a handle on appropriate
13 definitions and techniques for cumulative
14 effects assessments."

15 Now, I have several questions arising
16 from this evidence. Firstly, with all respect I would
17 suggest that you were somewhat vague in our answer to
18 Mr. Campbell's questions.

19 Is it Hydro's view that this two stage
20 process that we have just reviewed constitutes a full
21 cumulative impact assessment?

22 A. I take offence at being vague.

23 Q. Okay.

24 A. I don't think I was particularly
25 vague. I would say, no, our work was not

1 comprehensive - and I am reading from the transcript -
2 "was not comprehensive enough to be called a complete
3 cumulative effects assessment."

4 Q. Thank you.

5 A. As I mentioned to Ms. Kleer
6 yesterday, we discussed our emissions, effluents, waste
7 over a temporal frame over the period of time for our
8 plan.

9 Q. Is it Hydro's view, as you have
10 stated in your evidence, that this two-stage process
11 reflects the current state of the art?

12 A. No, I don't think a two-stage process
13 reflects state of the art. What I am suggesting is
14 that the art of cumulative effects assessment is
15 evolving and what we included in our plan I think
16 indicates the current state of the art, and as more
17 information is collected, as Rawson Academy and others
18 proceed, we will be developing better techniques and
19 more appropriate techniques.

20 Q. So in answer to my question would you
21 say that Hydro's work in this area reflects the current
22 state of the art? Was that a yes?

23 A. Yes, and I would also suggest that we
24 were approached by others to give direction and advice
25 on cumulative effects assessments.

1 Q. Going to that point, then. Is it
2 your view that experts in this field of study would
3 consider your process that we have outlined today to be
4 state of the art?

5 THE CHAIRMAN: She doesn't know the
6 answer to that. She considers it to be the current
7 state of the art.

8 MS. HOWES: For a plan stage, yes.

9 MR. H. WATSON: Okay.

10 Q. In your view, Ms. Howes, in relying
11 on this process that you have outlined, has Hydro
12 satisfied its own strategic principal 1.4 which
13 requires Hydro to take a leadership role in protecting
14 the environment?

15 MS. HOWES: A. I don't think that's how
16 it is phrased. I will just get 1.4.

17 Q. It is at page 15 of Exhibit 74.

18 A. You are right, it is phrased that
19 way.

20 I would say that, yes, it does show a
21 leadership role. We are investing time and effort in
22 working with others to determine what exactly
23 cumulative effects assessment is.

24 We have staff that have been assigned to
25 the federal government initiative, for example, to

1 determine techniques and technologies that -- or
2 techniques and methodologies in this particular area.

3 We are working willingly with Rawson
4 Academy and the federal government initiatives. We
5 have participated in workshops. I would have to
6 suggest that, yes, that is on the leading edge.

7 Q. Would you agree that in order to
8 understand the full cumulative impact of Hydro's
9 proposed development that it is necessary to understand
10 how it will interact with other factors existing or
11 pending in the system?

12 A. That is the premise behind the Rawson
13 Academy study.

14 Q. I agree.

15 A. And we have made a commitment as part
16 of the co-planning process with the Moose River Basin
17 to look at cumulative effects assessment.

18 Q. I guess I was trying to ensure that
19 your understanding of that word -- as you rightly
20 pointed out, there is some difference of opinion as to
21 what is constituted by those words.

22 What I am trying find out is when a
23 cumulative impact assessment is done, would you agree
24 that not only is it necessary to consider Hydro's
25 development, but it is necessary to consider other

1 development and, in fact, naturally occurring
2 phenomenon in the system.

3 [3:35 p.m.]

4 A. What do you mean by naturally
5 occurring phenomena? Volcanoes?

6 Q. Well, for instance, my understanding
7 and I am no expert, but my understanding is that
8 mercury occurs naturally.

9 A. Yes, that's true.

10 Q. So, in other words, when you are
11 considering the cumulative effect of a project, would
12 you agree that you not only have to look at the mercury
13 that might be produced by Hydro's activities, but also
14 that which is already pre-existing?

15 A. Yes, you would need an environmental
16 baseline that would consider in this case mercury.

17 Q. And would you consider development
18 that was proposed by other parties?

19 A. Yes. And that's why, as I stated it
20 several times, why we are participating in Rawson
21 Academy and others to look at the full range of
22 developments that are occurring in the Hudson Bay/James
23 Bay bioregion.

24 Q. I hope I haven't got the answer wrong
25 on this. But your involvement with Rawson, is the

1 extent of it sharing of information?

2 A. And expertise, yes.

3 Q. Okay. So you actually have people in
4 the field with Rawson then?

5 A. In the field. We have had ongoing
6 discussions and telephone calls. I am not sure whether
7 they have been involved in actual field studies.

8 I would imagine that the field work that
9 we have done in the experimental lakes district, for
10 example, would likely contribute to Rawson Academy's
11 work, and that work has been with respect to mercury.

12 Q. So this point it's more of an
13 information sharing?

14 A. It could be broader than that. I
15 don't have specific details on whether they have been
16 out in the field or not.

17 Q. Thank you.

18 In your direct evidence, Ms. Howes, which
19 follows the portion of your evidence which I have
20 reviewed a moment ago, you identified certain of the
21 important problems that Hydro considers to be
22 associated with cumulative impacts assessments. I
23 would now like to take a brief look at some of those
24 problems before I finish up.

25 A. Could you refresh my memory as to the

1 page? I closed the book.

2 Q. It's 26247, in Volume 148. The first
3 bit of evidence I would like to look at is at line 21
4 where you stated:

5 "Because I understand that some of
6 this was discussed in Panel 6, I will
7 only focus on certain of the important
8 problems I think are associated
9 cumulative effects assessment. The first
10 is how to collect and manage the data
11 necessary to establish a baseline
12 environment and to monitor effects."

13 Now, this was the first of the problems
14 you identified. And I guess I would refer the Board
15 and Ms. Howes to the Moose River Basin workshop report
16 which was prepared for the Department of Fisheries and
17 Oceans, and in particular to the first page of the
18 executive summary at the front of the book,

19 THE CHAIRMAN: Is this an exhibit?

20 MR. H. WATSON: This is an exhibit. I am
21 sorry, I don't know the number.

22 THE REGISTRAR: 719.

23 THE CHAIRMAN: 719, all right.

24 MR. H. WATSON: Q. I would just refer to
25 you the second paragraph where it's stated:

1 In March 1992 the Department of
2 Fisheries and Oceans convened a workshop
3 to screen the preliminary hypothesis of
4 effects. The purpose of the workshop was
5 twofold: to review in detail the
6 preliminary hypothesis of effect and
7 modify them where necessary, and to use
8 the refined hypothesis to identify the
9 information and tools that are required
10 to predict potential effects of the
11 various proposed developments on the
12 Moose River Basin.

13 Wouldn't you agree that this first
14 problem that you have identified is in large part the
15 very problem that the Department of Fisheries and Oceans
16 has set out to resolve?

17 MS. HOWES: A. I think they indeed had
18 some difficulty with establishing baseline environment,
19 and I am sure that they have made some assumptions in
20 here as to what their baseline environment was.

21 The other thing I should point out is
22 that there were two Ontario Hydro people who were the
23 steering committee for this particular workshop, so
24 their expertise was brought into play in helping to
25 define some of the assumptions for this study.

1 Q. Wouldn't you agree, or at least I
2 would agree that it is a difficult problem. Would you
3 agree that it's a problem that Hydro has to solve
4 before proceeding with its plans?

5 A. Proceeding with its plans?

6 Q. Yes.

7 A. No, I disagree. Certainly at a
8 project-specific stage we have committed to trying to
9 solve this problem.

10 I think it will require some work and
11 expertise of a number of environmental scientists
12 across Canada, and I think we have committed to
13 participate with them in developing appropriate tools
14 and techniques.

15 Q. I suppose the one exception which you
16 have already, I think, given some evidence on is with
17 respect to the Mattagami Complex.

18 A. No, I think that was you who
19 mentioned the Mattagami Complex.

20 Q. Am I right in thinking that there
21 will not be a cumulative impacts assessment?

22 A. There was an environmental assessment
23 done it was my understanding.

24 Q. I realize. But in terms of the use
25 of that word which is generally accepted despite the

1 difficulty with the defining it, would you agree that
2 it is Hydro's position that a cumulative effects
3 assessment, or their plan assessment as they have
4 called it, will not be done before the Mattagami
5 Complex?

6 A. I think you are confusing
7 terminology.

8 Cumulative effects assessment is quite
9 different than environmental impact assessment.

10 My understanding is that environmental
11 impact assessment wasn't undertaken for the Mattagami
12 Complex.

13 Q. Mr. Snelson, can you help?

14 MR. SNELSON: A. I was merely going to
15 say that I think the situation with respect to the
16 Mattagami development and the degree of assessment of
17 that was fully discussed in Panel 6, and I don't think
18 there is anybody here who has specific expertise to be
19 able to take that any further than Panel 6 did.

20 Q. I wanted to make sure, though,
21 because of something Ms. Howes had said a moment ago,
22 that Hydro had an undertaking before it proceeded with
23 project-specific work to do a cumulative impacts
24 assessments.

25 MS. HOWES: A. On the Moose River Basin

1 as part of the co-planning process.

2 Q. That doesn't include the Mattagami
3 site. So can I therefore conclude that assessment that
4 you are speaking of in fact won't be done until after
5 Mattagami Complex; am I right in that?

6 MRS. FORMUSA: Mr. Chairman, Mr. Snelson
7 is quite correct, that issue was canvassed and that
8 whole matter was reviewed in Panel 6.

9 MR. H. WATSON: I only raise it again,
10 Mr. Chairman, because I had the impression anyway from
11 Ms. Howes' answer that there was going to be that type
12 of assessment prior to a site-specific project and I
13 wanted to clarify that my understanding was in fact
14 from Panel 6 that that was not the case.

15 MRS. FORMUSA: We haven't changed since
16 Panel 6, I think is the answer to that.

17 MR. H. WATSON: Thank you, Mr. Chairman.

18 Q. I would like to go down to the third
19 problem you identified in your evidence which is at
20 page 26248, line 7, for those who would like to look.
21 Essentially you identified the problem as being how to
22 determine and factor in carrying capacity and threshold
23 limits. You explain that carrying capacity could be
24 described as the ability of the environment to sustain
25 and respond to environmental stress.

1 Can I presume from this that Hydro
2 considers of the difficulty in assessing of the ability
3 of the environment to sustain and respond to those kind
4 of stresses to be a problem that prevents a cumulative
5 impact assessment from being done?

6 MS. HOWES: A. No.

7 Q. Okay. Can you explain or elaborate
8 on that?

9 A. I think the issue I was trying to
10 identify here was that there needs to be an
11 identification of receptor species within a certain
12 ecosystem as indicators of change within that
13 particular ecosystem.

14 Part of the, I guess, lack of knowledge
15 in this area is what are the appropriate receptors to
16 look at as early indicators of environmental change
17 within an ecosystem.

18 So that was the point that I was trying
19 to make with that comment.

20 Q. So would you say that your third
21 problem then really is essentially the same as your
22 fourth, your fourth being --

23 A. No, I think they are different.

24 There are certain resiliences in
25 ecosystems, and trying to determine how much change an

1 ecosystem sustain before it is "destroyed" is an issue
2 as well.

3 So, certainly 3 and 4 are related, but I
4 think they are significantly different to keep them as
5 separate points.

6 Q. Ms. Howes, I would suggest that the
7 types of decisions and determinations that have to be
8 made and the sorting out of the types problems you
9 identify should be done prior to Hydro bringing its
10 proposals before this Board. And as an example of the
11 kind of problem I see with this, I would refer you to
12 Exhibit 646, and page B2, which we looked at a few
13 moment ago. This is that environmental characteristics
14 chart.

15 I guess my question is, how can Hydro
16 provide us with this type of chart without first having
17 assessed the full cumulative impact of all development
18 in the bioregion or at least in the basin?

19 A. The intent of the plan is to identify
20 what are the options available to us from a planning
21 point of view.

22 Certainly at a project-specific stage
23 more specific geographically based information is
24 needed in order to determine what the environmental
25 impacts are.

1 Q. So this particular chart makes no
2 attempt at trying it assess or identify cumulative
3 effects-type problems?

4 A. Again, I think you are having trouble
5 with the terminology.

6 Cumulative effects has a geographic
7 basis, this chart does not have geographic basis. It
8 was an attempt to identify of the environmental effects
9 of options available to us to produce and to manage
10 electricity.

11 Q. I will leave the question. Thanks.

12 Finally, I would like to look at the
13 fifth problem that you have identified as hindering or
14 presenting an assessment, cumulative impact-type
15 assessment. I would refer the Board to the top of page
16 26249 of Volume 148, where Ms. Howes stated:

17 "And fifth, what are the roles and
18 responsibilities of various agencies and
19 institutions in carrying out such
20 assessments."

21 With respect to this problem, am I
22 correct in assuming that what is meant by this is that
23 Hydro is not certain that it should have responsibility
24 for carrying out cumulative impact assessments?

25 A. No.

1 Q. Can you explain to me what the
2 essence of that problem is then?

3 A. I think their needs to be some
4 agreement, for example, if we are dealing on a broad
5 bioregion basis, the roles of the various levels of
6 government involved, they would be municipal
7 governments -- if we were looking at, for example, the
8 James Bay/Hudson Bay region, I would say there is
9 municipal government, there are First Nations to deal
10 with, there are three provincial governments and a
11 federal government.

12 I think as well there would have to be
13 some involvement of all of the proponents, which in
14 this case could be Manitoba Hydro, Ontario Hydro, Hydro
15 Quebec, and perhaps other proponents in the event that
16 there are other developments of a larger scale.

17 I think sorting out among, I think I have
18 named six or seven groups, will be a major issue.

19 Q. Okay. If I have accept for a moment
20 that Ontario Hydro may not have responsibility to carry
21 out full cumulative impact assessments on its own --

22 A. I don't think I said that.

23 THE CHAIRMAN: She never said that.

24 MR. H. WATSON: Q. Okay. So what you
25 are saying is just that the sharing of that

1 responsibility hasn't been finalized? Is that...

2 MS. HOWES: A. No. I will state it
3 exactly has I said it previously.

4 Q. Okay, I'm sorry for not paying
5 attention enough.

6 A. I am saying that the point of this is
7 that there are a whole list of players who include
8 three levels of provincial government, municipal
9 government, First Nations. There are many proponents
10 involved in this particular case if we are looking at
11 the Hudson Bay/James Bay bioregion. There has to be a
12 fair amount of sorting out who is doing what where and
13 when before the project can get under way. I am
14 suggesting that this is one of the obstacles for doing
15 cumulative impacts assessment.

16 Q. Notwithstanding that it is an
17 obstacle then, you have said that it is not Hydro's
18 intention to do that at this stage anyway; correct?

19 A. As part of a plan stage I have said
20 in my direct evidence, and at least three times to you
21 that I don't think it's appropriate to do this.

22 Q. I think we have established that.

23 In terms of the site-specific stage,
24 would you confirm for me then that this kind of problem
25 will be ironed out before those site-specific

1 developments are planned and processed?

2 A. I don't think I can give you any
3 guarantee that all of these issues will be resolved
4 between three provincial governments, one federal
5 government and a whole host of municipal governments.

6 We will do what the state-of-the-art from
7 a scientific basis is at the project-specific stage at
8 the appropriate time.

9 Q. So my final question is, there will
10 be a cumulative impact assessment --

11 THE CHAIRMAN: She has answered that
12 question.

13 MR. H. WATSON: Well, that's my last
14 question, Mr. Chairman, so I will break on that note.

15 THE CHAIRMAN: Thank you, Mr. Watson.

16 MR. H. WATSON: Thank you, Mr. Chairman,
17 and witness panel.

18 THE CHAIRMAN: I think we should take a
19 break.

20 Are you going to continue, Mr.
21 Klippenstein?

22 MR. KLIPPENSTEIN: I believe I am next.

23 THE CHAIRMAN: We will take a break and
24 then you can start after that.

25 THE REGISTRAR: Please come to order.

1 This hearing will recess for 15 minutes.

2 ---Recess at 3:48 p.m.

3 ---On resuming at 4:05 p.m.

4 THE CHAIRMAN: Please be seated.

5 Now Mr. Klippenstein.

6 MR. KLIPPENSTEIN: Thank you, Mr.

7 Chairman.

8 Members of the panel, I represent

9 Pollution Probe and I will be asking questions today
10 almost exclusively on the topic of municipal solid
11 waste incineration. I will call it incineration or
12 MSW.

13 THE CHAIRMAN: In a planning context, I
14 hope.

15 MR. KLIPPENSTEIN: That's my intention
16 and I trust I will be corrected if I stray.

17 CROSS-EXAMINATION BY MR. KLIPPENSTEIN:

18 Q. The planning context that I intend to
19 address is a comparison of energy recovery between
20 incineration of the material on the one hand and the
21 three Rs of that material on the other hand.

22 This was addressed in an earlier panel,
23 but as a result of the answers of Hydro there are some
24 major planning issues that remain, or at least one
25 major planning issue.

1 When I refer to a comparison of energy
2 recovery I mean the quantity of energy, perhaps
3 kilowatt hours, of incinerating -- excuse me, the
4 quantity of energy that is recovered from a particular
5 product when it is incinerated on the one hand, and on
6 the other hand the energy that is saved when that
7 product is either not used, reused or recycled.

8 Again, I am speaking of quantity not
9 cost. Quantity in kilowatt hours or equivalent units.

10 I understand, obviously, there is a
11 government ban on incinerators at this point and I am
12 not asking for Hydro's position on that ban. However,
13 the DSP includes incineration as a possible future
14 option and that is why I ask these questions.

15 Let me use an example of corrugated
16 cardboard. I don't know to whom I should be addressing
17 my questions, but would you confirm or agree with me
18 that corrugated cardboard is a significant element in
19 the waste stream?

20 MR. SHALABY: A. I think the fact that
21 nobody is jumping to their microphones indicates
22 that -- I fail to see the connection to planning, of
23 that series of questions or that series of discoveries
24 that you are looking for.

25 Q. All right. I will put it in a

1 nutshell.

2 THE CHAIRMAN: Let me try and bring
3 myself up to speed on this.

4 Ontario Hydro did a study of what they
5 called alternative energy, that was in Exhibit 344, and
6 included in that was municipal solid waste generation.

7 MR. KLIPPENSTEIN: That's correct. I can
8 show a chart if that helps orient members of the panel.

9 THE CHAIRMAN: You came for Panel 8, I
10 think it was--

11 MR. KLIPPENSTEIN: That's correct.

12 THE CHAIRMAN: --and we went into all of
13 that in quite a bit of detail.

14 MR. KLIPPENSTEIN: That's correct.

15 THE CHAIRMAN: Now, I take it from what
16 you said earlier that there was something that you
17 didn't get in Panel 8 that you are looking for in Panel
18 10 and perhaps if we could find out what that is that
19 would be a help.

20 MR. KLIPPENSTEIN: Certainly. I asked
21 whether Hydro had any studies on this exact topic;
22 namely, comparing the cost -- excuse me, the energy
23 recoverable from incineration versus the energy
24 recoverable through the 3Rs.

25 I believe Hydro's position was - I can

1 refer to the transcript excerpts if that's required -
2 Hydro's position was that they hadn't done any studies
3 and that their position was that they purchased power
4 from incinerators. It was not up to them to evaluate
5 the incinerators, that if the government approved the
6 incinerators that was good enough for them.

7 Now, my planning issue is whether that
8 answer should be acceptable to this Board, and I
9 propose to ask questions to show that that information
10 is very relevant to what this Board may be doing in
11 this hearing.

12 In fact, it is Pollution Probe's
13 intention to introduce evidence on that particular
14 topic and I suggest it is important from a planning
15 point of view that that be recognized.

16 THE CHAIRMAN: I suppose going down the
17 scale, first of all, it is not something which an
18 immediate approval is being asked for.

19 It is something that was collected along
20 with many, many others in Exhibit 344, none of which,
21 if my memory is correct, are in the position now to be
22 a recommended option for consideration.

23 Is that correct, Mr. Shalaby? You were
24 the author or at least the sponsor of 344.

25 MR. SHALABY: Some of the technologies we

1 described in 344 we indicated are best developed by
2 non-utility generation and the position you described
3 is correct in that Hydro will be a recipient of
4 electricity generated from municipal solid waste.

5 Hydro indicated that they do not have any
6 plans of building any incinerators or becoming
7 participants in the construction or operation of
8 incinerators.

9 MR. SNELSON: The only point I would add
10 to that is that the non-utility generation plan that
11 was discussed on Panel 5 did include the estimates of
12 how much non-utility generation was expected from waste
13 fueled facilities and did take into account that
14 currently there is a provincial ban on building new
15 incinerators.

16 THE CHAIRMAN: I suppose that your client
17 would say it doesn't matter whether it is Ontario Hydro
18 that generates it or a non-utility generator, the issue
19 is the same as far as the province is concerned?

20 MR. KLIPPENSTEIN: To a large extent,
21 yes. I think the panelists from Hydro agreed with me
22 in one of their prior cross-examinations that, first of
23 all, building these incinerators may have a negative
24 effect on the 3Rs and that Hydro's decision to buy from
25 these incinerators may have an effect on the number of

1 incinerators that are built.

2 From that I conclude or suggest that
3 there is a significant effect on the 3Rs from Hydro's
4 decision and that, in my submission, would be a
5 legitimate topic for inquiry for this panel. That is
6 the causal chain I perceive.

7 From the point of view of approvals
8 requested, it is a conundrum. I realize that there is
9 a ban on these incinerators, but that doesn't appear to
10 solve the issue.

11 There is in Exhibit 344, which was
12 submitted in January, a scenario where significant
13 amounts of power come from incinerators and if Hydro
14 wants to remove these elements of evidence from the
15 hearing we can go home early today, but...

16 THE CHAIRMAN: All right. I think at
17 least I have a little bit better context of it.

18 Perhaps you can proceed with your
19 questions, then.

20 MR. KLIPPENSTEIN: Thank you, Mr.
21 Chairman.

22 Q. Let me go back to my question, and I
23 take this question as an example to help focus the
24 discussion.

25 Would you agree that corrugated cardboard

1 is a significant element in the Ontario waste stream?

2 By significant, it is not a trick
3 question, it could be 5 per cent or 40 per cent. Just
4 it is not a trivial element.

5 MR. SHALABY: A. We had a half a day
6 discussion about this, the bounds of significance, so
7 we are well versed on that.

8 Not as an expert, and none of us here are
9 experts in waste and waste stream percentages and all
10 that, but as a person who passes industrial bins and
11 furniture storage bins, yes. My local supermarket has
12 a lot of cardboard every Monday and Tuesday.

13 Q. I won't make a big issue of your
14 answer on that topic.

15 Would you agree that incineration of
16 corrugated cardboard recovers a certain amount of
17 energy from that cardboard?

18 A. Yes.

19 Q. Would you agree, on the other hand,
20 that taking that same piece of corrugated cardboard out
21 of the waste stream and reusing it or recycling it
22 recovers a certain amount of energy because you don't
23 have a to recreate that piece of cardboard?

24 A. Yes.

25 Q. All right. Could I refer you,

1 please, to Exhibit 4 which is the DSP environmental
2 analysis. On page 33, on the left most column you will
3 see a paragraph that begins the Brundtland Commission
4 draws the following general conclusions, and the last
5 item on that column says:

6 "Less energy means fewer environmental
7 problems; low energy futures are
8 therefore more beneficial than high
9 energy futures."

10 Would you agree with those two
11 statements; namely that less energy means fewer
12 environmental problems and would you agree with the
13 proposition that low energy futures are more beneficial
14 than high energy futures?

15 MS. HOWES: A. I will answer that for
16 Mr. Shalaby. Yes, I agree.

17 Q. Okay. Would you agree with me that
18 in making that assessment in the context of this
19 hearing we are looking at the Province of Ontario as a
20 whole?

21 We are looking at the energy future of
22 Ontario, not a particular community and not, for
23 example, incinerator operators. It is the province as
24 a whole that we are looking at?

25 A. Yes, I would agree that the plan

1 agrees with the province as a whole.

2 Q. Would you agree with me that it would
3 be useful in that context to know whether incinerating
4 corrugated cardboard recovers more energy than applying
5 the 3Rs to corrugated cardboard as a general
6 proposition?

7 MR. SHALABY: A. I think the essence of
8 our testimony on municipal solid waste incineration is
9 that it is not an energy manufacturing operation. It
10 is a waste disposal operation primarily and secondarily
11 it is an energy recovery operation.

12 Most people who operate incinerators do
13 not go into that business to recover energy. That is
14 not their primary objective. The primary objective is
15 to get rid of the waste that would otherwise have to be
16 landfilled and has other environmental impacts.

17 So I think the pursuit of the energy
18 content and the energy recovered from cardboard versus
19 the energy saved is a really secondary or tertiary
20 aspect of incineration.

21 Q. Would you agree with me that the
22 perspective of this panel ought to be Ontario as a
23 whole rather than the well-being of individual
24 incinerator operators? Isn't that the right
25 perspective?

1 A. The Environmental Assessment Act
2 takes that perspective, yes.

3 Q. And that's what we are applying in
4 this exercise?

5 A. Yes.

6 Q. That from that perspective, isn't it
7 a valid question to ask what is the better way to treat
8 corrugated cardboard which will recover --

9 A. Not from an electricity planning
10 point of view. Again, I am having the difficulty
11 linking waste management issues to electricity planning
12 issues.

13 What you are discussing here is primarily
14 waste management issues and we indicated clearly that
15 municipal solid waste -- the incineration is a waste
16 management issue and the recovering of energy. What we
17 have said is Hydro will be prepared if that's what it
18 takes for a waste management strategy to work.

19 We are prepared to buy the energy. If
20 other people think this is a good idea for solving the
21 waste problem we will buy the electricity. That's the
22 extent of Hydro's judgment on what is a good way or not
23 a good way of recovering energy or solving the waste
24 problem.

25 Q. Would you agree with me that it is

1 possible that the choice how we treat corrugated
2 cardboard can have an energy impact on Ontario as a
3 whole, the choice being incineration on one hand or
4 application of the 3Rs?

5 A. It would be so minute as to -- I
6 would think it is quite irrelevant to the exercise we
7 are going through here.

8 Q. But you have no basis for that saying
9 that, do you?

10 A. Yes, I do.

11 Q. What is that?

12 A. That the energy recoverable from the
13 entire waste stream in Ontario, the document in 344, we
14 indicated to be very limited, to 50 or 100 or 150
15 megawatts.

16 If we gather all of the waste from most
17 of the large urban centres in Ontario and incinerate
18 that we are talking maybe 150 or 200 megawatts.

19 [4:25 p.m.]

20 Now, if you isolate the cardboard, which
21 will be a fraction of that again, the number is really
22 small.

23 Q. Now, you have identified and dealt
24 with one half of the equation; in other words, you have
25 dealt with the one hand.

1 Now, you haven't dealt with the other
2 hand which is how much energy would be recovered by
3 applying the 3Rs to the corrugated cardboard. I
4 suggest to you, you have no idea; is that correct?

5 A. That is correct, yes. But that's
6 more now into a demand management kind of thing if less
7 cardboard was manufactured in Ontario, how much less
8 electricity would be produced. That may be the context
9 you are talking about.

10 Q. It may well be a demand management
11 issue, but my question to you is, it is a valid
12 question to ask, which recovers more power for Ontario,
13 incineration versus the 3Rs? That is a valid question,
14 would you agree?

15 A. My answer was it's a question that
16 probably is valid from a waste management point of
17 view. My opinion, that it's not very relevant to
18 electricity planning issues that we are dealing with.

19 It's an interesting question. We can
20 talk about it, but in my opinion it will probably not
21 affect the electricity planning issues we are talking
22 about to any extent.

23 Q. And that's because there wouldn't be
24 much difference between the two ways of treating
25 cardboard from an energy point of view. Is that what

1 your assumption is?

2 A. The amounts involved would be small,
3 and the issues involved are not electricity planning
4 issues.

5 We can ask the same question, what if
6 less trucks were manufactured in Ontario, or what if
7 fewer wrappers handed out at a baseball game with the
8 hotdogs. We can ask many, many questions similar to
9 that.

10 Q. That's correct. The difference is
11 that Ontario Hydro is not making decisions which affect
12 the number of trucks being manufactured. However,
13 Hydro's evidence is that the decision on purchase of
14 power from incinerations may well have an effect on 3R
15 programs, and therefore, the question becomes very
16 relevant, what is the effect of 3Rs versus the effect
17 of incineration?

18 A. Well, you have asked me my opinion
19 and I have stated it twice.

20 Q. I take it you would agree, I believe,
21 that Hydro feels no responsibility for the effect its
22 decision on buying incinerator power may have on 3Rs?

23 A. I indicated that it opens up another
24 option in the waste management in Ontario. It opens
25 options and opening options is, in my opinion, a

1 positive contribution to the waste management issue.

2 Q. Does it open up another demand
3 management option?

4 A. What, the purchase of electricity
5 from incinerators?

6 Q. Versus a shoeing of that purchase in
7 support of 3Rs.

8 A. My limited knowledge of this area,
9 this is not one versus the other, and I think we
10 indicated that as well in Panel 8, that most waste
11 management strategies rely on a mix of landfill plus
12 reuse and recycling and incineration.

13 MS. HOWES: A. If I could just add
14 something at this point, too.

15 I think I made it quite clear in my
16 direct evidence that an environmental assessment would
17 have to be done for any municipal solid waste project
18 should the incineration ban be lifted in Ontario. I
19 would assume that during that process there would be an
20 extensive discussion of the energy savings from
21 recycled versus burning the cardboard or any other
22 refuse from waste. As in other projects, that would
23 definitely be a condition of our contract with the
24 NUGs. They would certainly have to get environmental
25 approval before we would consider it.

1 I think we have also been clear in our
2 evidence throughout too that Hydro's is committed to
3 the 3Rs. So I don't want to have leave with you the
4 impression that we are not concerned about waste
5 reduction through our plan.

6 Q. You mentioned I guess site-specific
7 hearings and site-specific applications, that's what
8 you are referring to?

9 A. Particularly for municipal solid
10 waste there would have to be a site-specific
11 environmental assessment undertaken.

12 Q. Would you agree with me that in that
13 context, when you are making a decision on a particular
14 incinerator, it would be useful and important to know
15 whether more energy is recovered from the proposed
16 incinerator or from the application of 3Rs?

17 A. I think that is a reasonable
18 discussion, or a reasonable question to be discussed in
19 that context, yes.

20 Q. And the information would be possibly
21 quite important, if we are looking at the question of
22 which option has the lower energy future?

23 A. At a site-specific stage I would say
24 yes, that should be one of the considerations.

25 MR. SNELSON: A. I think we should point

1 out again that at such a site-specific environmental
2 assessment it's unlikely that Ontario Hydro would be
3 the proponent. But our understanding is that such
4 facilities would need an environmental assessment.

5 Q. Thank you.

6 Now, Ms. Howes, I take it from your
7 statement that you feel that such a comparison would be
8 useful at the site-specific stage, but would you not
9 agree that it is also useful at this stage for this
10 panel?

11 MS. HOWES: A. I think Mr. Shalaby has
12 answered that. I think he was reiterating much of the
13 discussion that went on in Panel 8 on this particular
14 subject.

15 Q. All right. Thank you. If I could
16 refer you to then, panel members, to a supplementary
17 witness statement for Panel 10, which is Exhibit 646,
18 and in particular, attachment B, which is the
19 comparison of the options.

20 Mr. Chairman, I don't propose to go
21 through these in great detail. I do have a number of
22 items that I propose to raise.

23 If you could turn, panel members, to page
24 B-9, which refers to the social environment, and I
25 suppose the square that I am interested in is actually

1 on B-10. If you will look at the lines for the option
2 entitled: Waste Fuel, on the left, am I correct in
3 assuming that means MSW incineration or includes MSW
4 incineration as well as perhaps other options?

5 DR. TENNYSON: A. It includes it.

6 Q. And if I could direct you across that
7 line to the column headed Social Acceptance where it
8 says, "See general comments above re NUGs," and then if
9 I follow that direction and move up a box where it
10 says, "Non-utility generation considered an acceptable
11 supply option," would you agree with me that for
12 incinerators that's not really accurate because they
13 are generally met with a fair bit of social resistance;
14 would you say that's fair?

15 A. That statement only refers to the
16 issue of non-utility generation, renewables. So in
17 answer to your second part I think you will see down
18 across from renewable we talk about concerns about
19 compatibility of facilities.

20 Q. Okay, I see your point. The
21 reference to concerns about compatibility.

22 The reality is that there is usually
23 resistance to incinerators in a local community; is
24 that right?

25 A. To my knowledge there has been, yes,

1 I think as you are aware.

2 THE CHAIRMAN: I'm sorry, are you saying
3 that the "see general comments re NUGs" doesn't apply
4 to waste fuel, is that what you are saying?

5 DR. TENNYSON: What I intended to say was
6 that the comment on non-utility generation was to my
7 mind the fact that non-utility generation of whatever
8 form is considered an acceptable supply option.

9 THE CHAIRMAN: All right.

10 MR. KLIPPENSTEIN: Q. Now, in that box
11 again under waste fuels, I see no mention of the
12 potential negative impact of incinerators on 3R
13 programs; that's been omitted?

14 DR. TENNYSON: A. Yes, that's not there.

15 Q. And you would agree that would be a
16 valid entry in that box?

17 A. Are you looking under local community
18 impacts or where? Where are we looking?

19 Q. Under local community impact, that's
20 right.

21 A. I guess certainly I hadn't discussed
22 these in terms of programs generally going on in the
23 province. These were local community specific impacts
24 that could be -- we could certainly discuss that.

25 Q. I think the evidence from a previous

1 panel is that an incinerator could have a negative
2 impact on 3Rs programs, and I am suggesting to you that
3 that would be a valid entry in this particular box as
4 well.

5 A. I accept the point has been made. I
6 am just trying to think if I would necessarily put it
7 under local community impacts, an effect on a program.

8 I suppose you could. I am not going to
9 debate the point.

10 Q. Okay. If I could then refer to you
11 B-17 which evaluates the options in terms of
12 flexibility. Now, I am suggesting to you that in
13 almost all cases incinerators are constructed on the
14 basis of a contract between the owner or proponent and
15 some other body, usually a municipality, which requires
16 that a certain amount of waste be delivered or else the
17 price of delivering the waste goes way up. I believe
18 they are referred to as put-or-pay contracts.

19 Are you familiar with that arrangement in
20 the context of incinerators?

21 MR. SHALABY: A. No.

22 Q. Would you agree with me that if that
23 is the case, and we will be producing evidence to
24 demonstrate that, that might be a major limitation on
25 the flexibility of an incinerator option from an energy

1 planning points of view? If, for example, there is a
2 contract of 20 years duration which requires the
3 municipality to deliver X tonnes of waste, and if it
4 doesn't, it pays a large penalty. That's a major
5 inhibition on flexibility, wouldn't you agree?

6 A. What that does, my understanding of
7 what you are saying is that there will be an almost
8 constant output of electricity from the municipal
9 incinerator. The impact on flexibility is you cannot
10 turn it down, for example. That would be the
11 implication on flexibility.

12 MR. SNELSON: A. We have indicated that
13 in terms of operational flexibility, that dual use
14 facilities like cogeneration plants and waste fuel
15 plants are often operated to meet the requirements of
16 the other purpose of the dual purpose facility, and
17 that the electricity output is not controllable from an
18 electricity system point of view because the
19 cogeneration plant would be used when heat is required
20 or the waste fuel plant would be used because there is
21 waste that has to be burned, and I think that's
22 inherent in the situation with waste fuel plants where
23 the main purpose of the facility as Mr. Shalaby has
24 described, the main purpose is to dispose of waste and
25 electricity is the by-product.

1 So the plant will be operated based upon
2 waste disposal concerns rather than electricity
3 production concerns.

4 Q. I want to make a distinction here
5 between flexibility from the point of view of Ontario
6 Hydro's power requirements and flexibility in terms of
7 the investment of money in the incinerator.

8 I take it from what was said previously,
9 that Hydro would conclude that it was no business of
10 Hydro that a municipality might be stuck feeding
11 garbage at very high cost to an incinerator that cost
12 \$150 million.

13 Am I correct that Hydro would not see
14 that as any business of Hydro?

15 A. I don't believe that would be any
16 particular business of Hydro. Hydro would of course be
17 concerned with whatever were the terms of the contract
18 are for the sale of electricity from that facility to
19 Ontario Hydro. But I think apart from any secondary
20 impacts that the situation you are talking about might
21 have on the electricity contract, I don't think it's
22 any of our business.

23 Q. And again, if the decision of Hydro
24 to purchase power such as this from incinerators means
25 that certain incinerators are built that otherwise

1 wouldn't be built, and that some municipalities may be
2 locked into 20-year contracts to deliver garbage at a
3 high rate, that impact would not be something Hydro
4 would take into consideration I take from your prior
5 comments; is that right?

6 MS. HOWES: A. I think I have stated
7 before that any municipal solid waste operation in the
8 province would have to be subject to an environmental
9 assessment. It would be one of the conditions of our
10 purchase of electricity from that particular operation.
11 I think those issues might well be discussed at that
12 point. That's our responsibility.

13 Q. I presume at that stage Hydro would
14 want to take into consideration the effect of its power
15 purchase in terms of potentially locking in a
16 municipality over a 20-year contract. Would that be
17 fair factor in Hydro's consideration at that time?

18 A. I don't think I am familiar enough
19 with the contracts that Ontario Hydro has for its NUGs.
20 I don't even know whether a 20-year period is
21 appropriate.

22 Q. All right. Now, if I could refer to
23 you Exhibit 322.21, I will change the topic a little
24 bit, still discussing incineration. But just a quick
25 reference to NUG updates produced in May of 1992. If I

1 could refer you to page 2 of that exhibit. At the very
2 bottom of that page there is a reference made to a
3 review of the non-utility generation program which is
4 being undertaken focussing on the following principles.

5 Can you tell me whether that review of
6 the NUG program would consider the effect of
7 incinerators on 3R programs, or indeed are incinerators
8 included in this program at all?

9 MR. SNELSON: A. I think the incinerator
10 issue is a rather hypothetical issue at the moment
11 because there are certain incinerators that exist or
12 are under contract, and I don't know how many are in
13 that category, but my understanding is that with
14 respect to my incinerators, there is a ban on such
15 facilities at this time.

16 So I think at this point, this is talking
17 about the management of our NUG program today, I think
18 is a hypothetical issue. I don't think there are any
19 proposals that I know of other than ones that are sort
20 of grandfathered under previous arrangements.

21 Q. So incinerators wouldn't be
22 considered in this review then?

23 A. The review is I presume the review
24 that is discussed at the top of page 3.

25 Q. Okay. So there is no document that

1 is going to come out of this that's entitled: Review?

2 A. Not to my knowledge. Though I expect
3 there will be an update to the NUG plan sometime, but I
4 don't know the specific schedule for that.

5 MR. KLIPPENSTEIN: Mr. Chairman, those
6 are all my questions today.

7 THE PRESIDING MEMBER: Thank you very
8 much.

9 MR. KLIPPENSTEIN: Thank you, members of
10 the panel.

11 Thank you, Mr. Chairman.

12 THE CHAIRMAN: Mr. Monger, do you want to
13 start or do you want to start tomorrow morning? It is
14 up to you.

15 MR. MONGER: I am in your hands, Mr.
16 Chairman. I have a couple of very small points that I
17 could deal with.

18 THE CHAIRMAN: Why don't we do that then.

19 MR. MONGER: I'm sorry, Mr. Chairman, I
20 just have to hand out a document.

21 Mr. Chairman, you should have before you
22 an issues list of the issues that CAC plans to deal
23 with in their cross-examination.

24 Just so you know, the first three issues
25 we should be able to deal with fairly quickly, they are

1 clarifications and housekeeping issues, the last two
2 are a little more substantive.

3 THE CHAIRMAN: I don't think we have it.

4 THE REGISTRAR: Which one are you talking
5 about? I will ask you to identify them for me.

6 MR. MONGER: The issues list for the
7 Consumers Association of Canada.

8 THE REGISTRAR: That will be 720.

9 MR. MONGER: I don't think you need to
10 make it an exhibit. It's just an outline.

11 CROSS-EXAMINATION BY MR. MONGER:

12 Q. The first question - and I suspect
13 that should have been dealt with as an interrogatory
14 but it wasn't so I will ask it - it deals with a
15 document that was referred to in Panel 4. In Panel 4
16 Mr. Wilson told us that about a month after we asked
17 our Panel 4 questions, a document would be released
18 which was an independent outside consultant's report
19 analyzing the demand management plan. It was to
20 supersede Exhibit 24 and I believe it was prepared by
21 Barakat & Chamberlin.

22 My question I guess for Mr. Shalaby is,
23 simply, has that report been produced and is it
24 available to us?

25 MR. SHALABY: A. I don't know whether it

1 has been finalized. I have seen it in draft form but I
2 don't know whether it has been finalized.

3 Q. Is this the same document that's
4 referred to in the document entitled: Development of
5 the 1992 Update, Evaluation of the Demand/Supply
6 Plan -- or sorry, Evaluation of the Demand Management
7 Plan?

8 I understand that sometime in the near
9 future we are to receive a document entitled:
10 Re-evaluation. Do you know if that's the same
11 document?

12 A. Perhaps you can point me to what that
13 second title is.

14 Q. Okay. It is one that's listed under
15 Closing the Loop in a document which I believe has been
16 filed but I don't know the exhibit number for it,
17 called Development of the 1992 Update.

18 A. Yes. That's Exhibit 692.

19 Q. That's Exhibit 692?

20 A. Right.

21 Q. If you look to page 4, the third
22 bullet down, it says that the demand management
23 re-evaluation was performed between February and March
24 26, 1992, and that this will be filed with the hearing.

25 A. That's a separate document.

1 Q. That's a separate document?

2 A. Yes.

3 Q. Is there also an intention to file
4 the independent consultants update or review of the
5 demand management plan?

6 A. Since it is in draft form I don't
7 know whether there is such an intention.

8 Events have overtaken the relevance of
9 that report, I would think. Hydro's plans have changed
10 significantly since the preparation of that report.

11 Q. It is my understanding that that
12 report wasn't finalized until a month more or less
13 after Panel 4 was concluded.

14 Are you saying that they used data that
15 wasn't current with Panel 4?

16 A. My understanding is that issues like
17 fuel switching and so on were not part of the Hydro
18 program at the time that report was being commissioned.

19 MR. MONGER: I would like an undertaking,
20 I suppose I should be spoke to Mrs. Formusa about this,
21 to have that document if it becomes a Hydro document
22 or, I guess, regardless. Are you willing to give me an
23 undertaking?

24 THE CHAIRMAN: Are we talking about
25 several documents?

1 MR. MONGER: I am talking about the
2 independent consultant's review that we were told on
3 Panel 4 would be updating Exhibit 24.

4 THE CHAIRMAN: Mr. Shalaby now says it is
5 out of date; is that right?

6 MR. SHALABY: Events have taken us
7 further than the time we prepared that document. I
8 don't know whether Hydro decided to leave it at that
9 the draft stage or to invest anymore in upgrading it to
10 reflect our current plans. I don't know the answer to
11 that.

12 THE CHAIRMAN: Let me see if I understand
13 correctly. You understand that it was submitted in
14 draft form.

15 MR. SHALABY: Yes.

16 THE CHAIRMAN: But you are not certain
17 whether it was ever reduced to final form.

18 MR. SHALABY: That is correct.

19 THE CHAIRMAN: And there is a possibility
20 it was not reduced to final form because events had
21 overtaken it; is that right?

22 MR. SHALABY: That is correct, Mr.
23 Chairman.

24 THE CHAIRMAN: So what Mr. Monger would
25 like to know, at least this much, if was in final form

1 can it be produced?

2 MR. SHALABY: If it is a final form I can
3 check whether it can be produced.

4 Some of these things have confidentiality
5 clauses because it discloses information about other
6 utilities, so I don't know whether there are any
7 restrictions on Hydro releasing that report. I have to
8 check.

9 THE CHAIRMAN: All right. The next more
10 difficult question is, if it is in draft form can you
11 produce the draft of it?

12 MR. SHALABY: I would like to check with
13 the energy management people to see what considerations
14 they want to release it under and whether they are
15 prepared to do that. I don't know the answer to that.

16 MRS. FORMUSA: I don't know any of the
17 information surrounding this documentation and I would
18 like to reserve the right to myself or Mr. Campbell to
19 come back and submissions on the utility of producing a
20 draft, but I don't know.

21 THE CHAIRMAN: Let me ask Mr. Shalaby
22 again so I understand what you are saying.

23 Panel 4's evidence made use of the draft
24 form or didn't make use of it?

25 MR. SHALABY: It made use of the draft

1 form.

2 THE CHAIRMAN: So Panel 4's evidence was
3 based on this draft, but now it has been changed.

4 MR. SHALABY: To the extent where it
5 referred to activities outside of Ontario, that report
6 was useful to us.

7 THE CHAIRMAN: So if I were now wanting
8 to know what is going on in demand management and this
9 particular report is passed over or outdated or
10 whatever, what would I look at other than the evidence
11 given at this panel?

12 MR. SHALABY: It is still the most
13 recent. We haven't done anything beyond that one. It
14 would be the most recent comparison of Hydro's efforts
15 comparing it to other utilities.

16 THE CHAIRMAN: Well then, what is it we
17 are talking about in Exhibit 692 at page 4?

18 MR. SHALABY: That is the recalculation
19 of the avoided cost of various demand management
20 options in Ontario, to know whether they still make the
21 grade or not and whether they become part of the
22 integrated plan or not. So one is a calculation, the
23 other one is a comparison to other utilities.

24 MR. MONGER: Mr. Chairman, just so the
25 page reference is complete. This matter was brought up

1 at page 11741 of Volume 65. At that time we asked
2 whether there was any study currently under way by
3 Ontario Hydro which updates Exhibit 24 or supersedes
4 Exhibit 24 in terms of comprehensive analysis, and we
5 were told that there was one and it would be ready for
6 release within a month of that date.

7 If possible, for obvious reasons, we
8 would like to have a copy of that document for
9 preparation of our own case.

10 THE CHAIRMAN: It is in hand now and we
11 will have to see what happens.

12 We better give it an undertaking number.

13 THE REGISTRAR: 684.34.

14 ---UNDERTAKING NO. 684.34: Ontario Hydro undertakes to
15 provide independent consultant's review
updating Exhibit 24.

16 MRS. FORMUSA: Mr. Chairman, what we will
17 do then is the look to the status of that report which
18 was referred to in page 11741, and if there is any
19 problems with respect to confidentiality, relevance,
20 draft, we will get back to you.

21 THE CHAIRMAN: All right. That's one
22 thing out of the way.

23 Now, have we got time for another one?

24 MR. MONGER: I believe I have one more
25 that can be dealt with fairly quickly, and it's simply

1 a clarification point with respect to Dr. Long's
2 evidence as it is in Volume 148 at pages 26256 to
3 26260. At that point Dr. Long was talking about
4 financial assessments.

5 DR. LONG: Sorry, the page number was
6 26256?

7 MR. MONGER: 26256.

8 DR. LONG: Okay.

9 MR. MONGER: Q. You were asked to
10 outline what kind of plan assessment or what plan
11 assessment evolves from a financial viewpoint, and it
12 was a little bit unclear to me what the purpose of the
13 finance assessment is.

14 DR. LONG: A. It is really something in
15 addition to the cost assessments that have been talked
16 about earlier. And as I stated there, it involves the
17 simulation of financial results, and it is really to
18 provide some indication and hopefully comfort that the
19 plans under consideration provide for financial results
20 that the Corporation thinks it can live with. And as I
21 also mentioned, the main focus is on the outlook for
22 electricity prices and the outlook for borrowing
23 levels.

24 Q. Okay. I don't know if you can do
25 this, I understand that there has been a lot of

1 discussion previously on the ability to quantify the
2 importance of that criteria. But what importance
3 within the general planning framework is placed on this
4 financial analysis?

5 A. As I indicated, hopefully it acts as
6 bit of a check on the results of the previous cost
7 assessments. If the cost assessments have indicated
8 that the selected plans, for instance, or a selected
9 plan has lower overall cost than another, what the
10 financial results will show will effectively be the
11 temporal variations in our revenues and our borrowing
12 requirements associated with that plan.

13 Q. Okay. My clients, the Consumers
14 Association of Canada, is particularly interested in
15 the rate issues as they form a part of this assessment.
16 And on page 26258 at the bottom of the page you say:

17 "In assessing rates we look at the
18 level and trend in the rate outlook, and
19 our traditional benchmark for this
20 assessment has been inflation. And while
21 this is expected to continue to be an
22 important comparison, because of the
23 changes in our business, especially with
24 respect to demand management which has an
25 emphasis not on minimizing rates but

1 maximizing value, we are considering
2 other benchmarks such as rates in other
3 jurisdictions."

4 Now, can you tell me what you are trying
5 to do when you are doing a financial assessment of
6 rates? What is the purpose of that?

7 A. As I said, it is to, broadly
8 speaking, measure the acceptability of the rate
9 projections, and by and large the perspective is that
10 from our customers' point of view.

11 Q. What makes a rate acceptable or not?

12 A. Certainly in terms of changes in
13 rates, as that testimony indicated, our traditional
14 benchmark has been inflation, rates that have increased
15 more rapidly than the rate of inflation are viewed as
16 being less acceptable to our customers.

17 Q. Has that changed?

18 A. As indicated here, demand management
19 in particular, I think, has added a different wrinkle
20 to our cost structure and therefore the impact on
21 rates.

22 I think that coupled with the fact that
23 we have a near term outlook which shows rates
24 increasing significantly above the rate of inflation
25 for a few years, clearly that's something that on that

1 basis is of concern to management.

2 We have, as also indicated there, gone to
3 looking at how rates and our rate projections compare
4 to those in other jurisdictions.

5 Q. Are you saying that you believe that
6 rates that increase above inflation are today more
7 acceptable to customers than they were in the past?

8 A. To the extent that, for instance,
9 they are a reflection of our emphasis on demand
10 management, I think there is some truth to that
11 statement. But in terms of their impact, economic
12 impact on customers, their ability to pay their bills,
13 from an individual customer's point of view I'm not
14 sure that a lot has changed.

15 I think they certainly will view prices
16 increasing faster than the rate of inflation in a
17 negative manner.

18 Q. Now, could you explain what the
19 purpose of comparing to rates in other jurisdictions
20 is?

21 A. Probably mainly twofold. One is from
22 the point of view of competitiveness, say, from our
23 industry's point of view, comparing rates in Ontario to
24 be it neighbouring jurisdictions or other jurisdictions
25 that that industry may have to compete with.

1 And secondly, from the point of view of
2 management practice of the company, the notion of
3 benchmarking is I think a fairly well known practice,
4 comparing ourselves with other companies, other
5 utilities that we think are worthy of that comparison
6 and seeing how they are able to manage rates versus the
7 manner in which we are able to.

8 MR. MONGER: Mr. Chairman, I have about
9 three more questions, but it could take five, maybe 10
10 minutes.

11 THE CHAIRMAN: Let's not take that risk.
12 So we will adjourn until tomorrow morning at ten
13 o'clock.

14 MR. MONGER: Thank you.

15 THE REGISTRAR: Please come to order.
16 This hearing will adjourn until ten o'clock tomorrow
17 morning.

18 ---Whereupon the hearing was adjourned at 5:00 p.m., to
19 be reconvened on Wednesday, June 17, 1992, at
20 10:00 a.m.

21
22
23
24
25 JAS/MC [c. copyright 1985]



